00110466

00110466

Digitized with financial assistance from

Shri Brihad Bhartiya Samaj

on 24 February, 2020

REPORT

OF THE

INDIAN HEMP DRUGS COMMISSION,

1893-94.

110466

President:

The Hon'ble W. MACKWORTH YOUNG, M.A., C.S.I., First Financial Commissioner, Punjab.

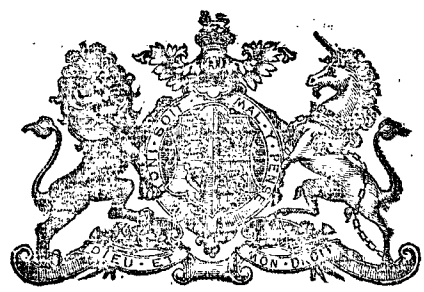
Members:

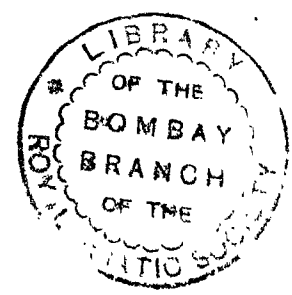
1. Mr. H. T. OMMANNEY, Collector, Panch Mahals, Bombay.
2. Mr. A. H. L. FRASER, M.A., Commissioner, Chhattisgarh Division, Central Provinces.
3. Surgeon-Major C. J. H. WARDEN, Professor of Chemistry, Medical College, and Chemical Examiner to Government, Calcutta; Officiating Medical Storekeeper to Government, Calcutta.
4. Raja SOSHI SIKHARESWAR ROY, of Tahirpur, Bengal.
5. KANWAR HARNAM SINGH, Ahluwalia, C.I.E., Punjab.
6. LALA NIHAL CHAND, of Muzaffarnagar, North-Western Provinces.

Secretary:

Mr. H. J. McINTOSH, Under-Secretary to the Government of Bengal, Financial and Municipal Departments.

Bt. J. 36
110466





SIMLA:
PRINTED AT THE GOVERNMENT CENTRAL PRINTING OFFICE.

1894.

CONTENTS.

CHAPTER I.

INTRODUCTORY.

PARA.		PAGE.
1.	Appointment of the Commission: its object	1
2.	Constitution of the Commission	*ib.*
3.	Instructions to the Commission	2
4.	Commission's method of inquiry	4
5.	Invitation to persons interested to lay their views before the Commission	*ib.*
6.	Selection of witnesses by Local Governments	5
7.	Information from official and other sources	6
8.	Preliminary tour: Objects and reasons of —	*ib.*
9.	Lunatic asylums	7
10.	Connection between hemp drugs and violent crime	8
11.	Native States	*ib.*
12.	The Army	*ib.*
13.	Sketch of the proceedings of the Commission	*ib.*
14.	Attendance of Members	11
15.	The witnesses	*ib.*
16.	The evidence: Method of treatment of —	13

CHAPTER II.

IMPORTANT POINTS CONNECTED WITH THE NATURAL HISTORY OF THE HEMP PLANT (CANNABIS SATIVA).

17.	Limitation of discussion	15
18.	Points for discussion	*ib.*
19.	Is the hemp plant indigenous to India?	*ib.*
20.	Is the fibre plant identical with the narcotic plant?	16
21.	Description of the hemp plant	*ib.*
22.	Existence of races of the hemp plant yielding the different products ...	17
23.	Does the fibre plant yield narcotics?	*ib.*
24.	Does the narcotic plant yield fibre?	*ib.*

CHAPTER III.

THE EXISTENCE, PREVALENCE, AND CHARACTER OF THE SPONTANEOUS GROWTH.

25.	Bengal: The wild growth not found over the whole province	19
26.	The Patna Division north of the Ganges	*ib.*
27.	The Bhagalpur Division	*ib.*
28.	The Rajshahi Division	*ib.*
29.	The Dacca and Chittagong Divisions	20
30.	The central part of Lower Bengal	*ib.*
31.	South-Western Bengal bounded by the Ganges and Bhagirathi ...	*ib.*
32.	The Tributary States of Orissa	*ib.*
33.	The Political States of Chota Nagpur	21
34.	Kuch Behar	*ib.*
35.	Hill Tipperah	*ib.*

PARA.		PAGE.
36.	Assam:	
	The wild growth existed before ganja shops were established ...	21
37.	The wild growth in the valleys	*ib.*
38.	The wild growth in the hills	22
39.	The spontaneous growth must be regarded as wild	*ib.*
40.	Manipur	*ib.*
41.	North-Western Provinces:	
	The official account of the wild growth	23
42.	The evidence corroborates the official account	24
43.	Garhwal Tehri	*ib.*
44.	Rampur	*ib.*
45.	Punjab:	
	Wild growth in the Himalayas and Terai	*ib.*
46.	The limits of the submontane belt of wild growth	25
47.	The supposed wild hemp of the Suleiman Range	*ib.*
48.	Spontaneous growth in the plain country	26
49.	Area of wild growth defined	*ib.*
50.	Punjab States	*ib.*
51.	Central Provinces:	
	The wild growth does not exist	*ib.*
52.	Feudatory States	27
53.	Madras:	
	No official knowledge of wild growth	*ib.*
54.	Evidence regarding the wild growth	*ib.*
55.	The chance growth of the Presidency is not wild	28
56.	Travancore and Cochin	*ib.*
57.	Sondur, Banganapalle, and Pudukottai	*ib.*
58.	Bombay:	
	There is no wild growth	*ib.*
59.	Aden	*ib.*
60.	Kathiawar	*ib.*
61.	Cutch	29
62.	Palanpur	*ib.*
63.	Mahi Kantha ... ... }	*ib.*
	Rewa Kantha ... ... }	
64.	Kolhapur and Southern Maratha Country	*ib.*
65.	Various States	*ib.*
66.	Sind:	
	The supposed wild hemp of the Baluch hills	*ib.*
67.	No wild growth in the Indus Valley	*ib.*
68.	Khairpur	30
69.	Berar	*ib.*
70.	Ajmere-Merwara	*ib.*
71.	Coorg	*ib.*
72.	Quetta-Pishin	*ib.*
73.	Burma:	
	Absence of wild growth remarkable	*ib.*
74.	Evidence regarding wild growth	*ib.*
75.	No wild growth in the settled districts, but probably exists in the northern mountain ranges	31
76.	Mysore	*ib.*
77.	Rajputana	*ib.*
78.	Central India	32
79.	Hyderabad	*ib.*
80.	Baroda	*ib.*
81	Kashmir	*ib.*

PARA. PAGE.

82. Two kinds of wild growth in Kashmir proper 32
83. Nepal 33
84. Summary: The area of wild growth ... ... *ib.*
85. The manner in which the wild growth is propagated ... ... *ib.*
86. Conditions favourable to the wild growth 34
87. Conditions unsuitable to the wild growth prevailing in other parts of India ... ... *ib.*
88. Areas where the spontaneous growth may be important outside the region of wild growth ... ... *ib.*

CHAPTER IV.

EXTENT OF CULTIVATION, AND ITS TENDENCY TO INCREASE OR DECREASE.

89. Bengal:
Cultivation confined to a limited tract 35
90. There is no unlicensed cultivation in the tract, and the tract is being reduced in area ... ... *ib.*
91. The area cultivated ... ... *ib.*
92. Clandestine cultivation: not on a large scale 36
93. The character of the clandestine cultivation ... ... *ib.*
94. The divisions where clandestine cultivation appears to be most common 37
95. Kuch Behar ... ... *ib.*
96. Tributary States of Orissa:
The extent and character of the cultivation... ... ... *ib.*
97. No decided evidence of increase in the cultivation 38
98. Political States of Chota Nagpur:
Cultivation is under restriction ... ... *ib.*
99. The character and extent of the cultivation ... ... *ib.*
100. Hill Tippera 39
101. Assam:
Cultivation prohibited and clandestine cultivation unimportant ... *ib.*
102. Cultivation in the hill ranges in and bordering the province ... *ib.*
103. North-Western Provinces:
Extent of cultivation in the Himalayan Division 40
104. Extent of regular cultivation in the plains ... ... *ib.*
105. Patsan is not hemp (*Cannabis*) ... ... *ib.*
106. Homestead cultivation in the plains 41
107. The range of cultivation in Garhwal ... ... *ib.*
108. Cultivation discouraged by the idea that it is illegal:
Local production of ganja has decreased ... ... *ib.*
109. Rampur 42
110. Garhwal and Tehri ... ... *ib.*
111. Punjab:
Himalayan cultivation ... ... *ib.*
112. Bhang cultivation in the south-west part of the province ... *ib.*
113. Cultivation not increasing 43
114. Punjab States ... ... *ib.*
115. Central Provinces:
The progress of restriction of cultivation ... ... *ib.*
116. The figures of cultivation in Excise Memorandum to be corrected by figures given by Deputy Commissioner, Nimar 44
117. The normal acreage of cultivation ... ... *ib.*
118. Illicit cultivation is rare ... ... *ib.*
119. Feudatory States 45

PARA. PAGE.

120. Madras :
Distribution of cultivation as given by the Deputy Director, Land Records and Agriculture 45
121. Extent of regular cultivation : Figures of doubtful accuracy ... *ib.*
122. Home cultivation common, but probably decreasing 46
123. The extent of home cultivation 47
124. Madras States :
Sondur, Banganapalle, Pudukottai, Travancore, and Cochin ... 48
125. Bombay :
Extent of regular cultivation ... ... *ib.*
126. Cultivation decreasing 49
127. Home cultivation is rare ... ... *ib.*
128. Native States :
The south of the Presidency ... ... *ib.*
129. The north of the Presidency 50
130. Sind and Khairpur ... ... *ib.*
131. Aden 51
132. Berar ... ... *ib.*
133. Ajmere 52
134. Coorg ... ... *ib.*
135. Baluchistan ... ... *ib.*
136. Burma:
Extent of cultivation before the prohibition ... ... *ib.*
137. Extent of cultivation in the settled districts at the present time ... 53
138. Cultivation on the frontier and in the remoter regions of the province ... ... *ib.*
139. Mysore 54
140. Hyderabad ... ... *ib.*
141. Rajputana 55
142. Central India :
Extent of cultivation in Indore ... ... *ib.*
143. Extent of cultivation in Gwalior ... ... *ib.*
144. Extent of cultivation in Dewas and other States 56
145. No extensive cultivation in other States ... ... *ib.*
146. Ascertained area of regular cultivation ... ... *ib.*
147. Baroda ... ... *ib.*
148. Kashmir 57
149. Nepal ... ... *ib.*
150. Summary... ... ... *ib.*

CHAPTER V.

METHODS OF CULTIVATION AND MATTERS CONNECTED THEREWITH.

151. Definition of the narcotic products of the hemp plant 59
152. Ganja may be got from the wild as well as the cultivated plant ... *ib.*
153. The drug bhang often consists of ganja ... ... *ib.*
154. Charas is not always the simple resin 60
155. Bengal ... ... *ib.*
156. Regular cultivation of the Ganja Mahal : Preparation of the field ... *ib.*
157. The nursery conditions requisite to the germination of seed and growth of seedlings 61
158. Transplanting ... ... *ib.*
159. The seedlings prefer high and dry soil 62
160. Treatment of crop between planting out and removal of the males ... *ib.*

PARA.		PAGE.
161.	The elimination of the males	62
162.	Maturing of the crop and detection of abnormal females	63
163.	The Bengal cultivator misnames the sexes	*ib.*
164.	Cultivation not confined to any class	*ib.*
165.	Rain damages the crop when it is maturing	*ib.*
166.	Irregular cultivation: It may yield ganja, but probably does not often do so	64
167.	Tributary Mahals	*ib.*
168.	Political States, Chota Nagpur: Information derived from an inquiry made in 1890	65
169.	Hill Tippera	66
170.	Kuch Behar	*ib.*
171.	Assam	*ib.*
172.	North-Western Provinces	*ib.*
173.	Cultivation in the Himalayas	*ib.*
174.	Class of cultivators: Cultivation is not reputable	67
175.	The regular cultivation of bhang	*ib.*
176.	Secret cultivation	68
177.	Cultivation for ganja in former days	*ib.*
178.	Principal features of irregular cultivation	*ib.*
179.	Tehri Garhwal and Rampur	*ib.*
180.	Punjab: Himalayan cultivation	69
181.	Cultivation in the plains for bhang	*ib.*
182.	A few details of the method of cultivation	*ib.*
183.	Punjab States	70
184.	Central Provinces	*ib.*
185.	The regular cultivation	*ib.*
186.	The detection and removal of male plants	71
187.	The female plant with abnormal male blossoms	72
188.	The seed crop	*ib.*
189.	Tributary States	*ib.*
190.	Madras	*ib.*
191.	Regular cultivation in North Arcot	*ib.*
192.	Regular cultivation in the Kistna district	73
193.	The nursery	*ib.*
194.	Irregular and homestead cultivation	*ib.*
195.	Madras States	74
196.	Bombay: Soil preferred and season of sowing	*ib.*
197.	Sowing and treatment of the crop...	75
198.	Male and female plants and their different forms	*ib.*
199.	Cultivation in Gujarat...	78
200.	Bombay States	*ib.*
201.	Aden	*ib.*
202.	Sind	*ib.*
203.	The regular cultivation	*ib.*
204.	Male plant extirpated	79
205.	Hindus probably preponderate among the cultivators	*ib.*
206.	Khairpur	*ib.*
207.	Berar	*ib.*
208.	Ajmere	80
209.	Coorg	*ib.*
210.	Baluchistan	*ib.*
211.	Burma	*ib.*
212.	Mysore	81

PARA.		PAGE.
213.	Hyderabad	81
214.	Rajputana...	82
215.	Central India	*ib.*
216.	Baroda	83
217.	Kashmir	*ib.*
218.	Nepal	*ib.*
219.	Information furnished by the Darbar	84

CHAPTER VI.

PREPARATION OF THE RAW DRUGS FROM THE CULTIVATED AND WILD PLANT.

220.	Bengal	85
221.	The manufacture of flat ganja	*ib.*
222.	Manufacture of round ganja	86
223.	The Bengal manufacture specially elaborate	*ib.*
224.	The effect of the manufacturing processes	87
225.	Disposal of stick, leaf, seeds, and fragments	*ib.*
226.	Preparation of bhang	*ib.*
227.	Preparation of ganja from spontaneous growth	88
228.	Evidence as to existence of wild ganja	89
229.	Preparation of ganja from illicit cultivation	90
230.	Tributary States of Chota Nagpur and Orissa: Preparation of ganja and bhang	*ib.*
231.	Hill Tippera	91
232.	Preparation of charas	*ib.*
233.	Classes engaged in preparation of the drugs	*ib.*
234.	Assam	*ib.*
235.	North-Western Provinces: Preparation of ganja from plant cultivated secretly	*ib.*
236.	Preparation of ganja from wild growth	92
237.	Preparation of bhang	93
238.	Preparation of charas	*ib.*
239.	Miscellaneous information about the preparation of charas ...	94
240.	North-Western Provinces States	*ib.*
241.	Punjab	*ib.*
242.	Preparation of bhang	*ib.*
243.	Preparation of charas...	*ib.*
244.	Charas in "Punjab Products"	95
245.	Preparation of charas in Yarkand...	*ib.*
246.	Punjab States	*ib.*
247.	Central Provinces: Preparation of ganja	96
248.	Khandwa ganja inferior to that of Bengal	*ib.*
249.	Feudatory States, Central Provinces	*ib.*
250.	Madras bhang not known as distinct from ganja	*ib.*
251.	Preparation of ganja in North Arcot	97
252.	Preparations of ganja in the Kistna district	*ib.*
253.	Peculiar method of preparing bhang	*ib.*
254.	Travancore	98
255.	Bombay	*ib.*
256.	Bombay States	99
257.	Aden	*ib.*
258.	Sind with Khairpur: Preparation of bhang	*ib.*

PARA.		PAGE.
259.	Miscellaneous information	99
260.	Preparation of fibre	100
261.	Berar	*ib.*
262.	Ajmere	*ib.*
263.	Coorg	*ib.*
264.	Baluchistan	*ib.*
265.	Burma	*ib.*
266.	Mysore	101
267.	Hyderabad	*ib.*
268.	Rajputana	*ib.*
269.	Central India	*ib.*
270.	Baroda	102
271.	Kashmir	*ib.*
272.	Nepal	*ib.*
273.	Summary	103
274.	Deterioration of hemp drugs	*ib.*
275.	Causes of deterioration	104
276.	Rules regarding deterioration	105
277.	Dr. Prain's experiments in packing	*ib.*

CHAPTER VII.

TRADE AND MOVEMENT OF THE HEMP DRUGS.

278.	Bengal	107
279.	Exports of ganja	*ib.*
280.	Exports of ganja to North-Western Provinces	*ib.*
281.	Imports of ganja	108
282.	Bhang and charas	*ib.*
283.	Kuch Behar	*ib.*
284.	The Tributary States of Orissa	*ib.*
285.	Political States of Chota Nagpur	*ib.*
286.	Hill Tippera	*ib.*
287.	Assam	109
288.	North-Western Provinces	*ib.*
289.	Ganja imports	*ib.*
290.	Gwalior the principal source of supply of ganja	110
291.	Khandwa and Gwalior ganja inferior to that of Bengal	*ib.*
292.	Other sources of ganja supply	111
293.	Import of charas	*ib.*
294.	Charas produced in the Himalayas	*ib.*
295.	Export of charas	112
296.	Import and export of bhang	*ib.*
297.	Rampur	*ib.*
298.	Tehri Garhwal	*ib.*
299.	Punjab	113
300.	Import of charas	*ib.*
301.	Punjab States	114
302.	Central Provinces	115
303.	Quantity of ganja produced	*ib.*
304.	Export of ganja	*ib.*
305.	Feudatory States, Central Provinces	116
306.	Madras	*ib.*
307.	Probable amount of ganja produced	*ib.*
308.	Exports of ganja	117
309.	Madras States	*ib.*

PARA.		PAGE.
310.	Bombay: Probable amount of ganja produced	117
311.	Statistics of sale unreliable: Estimate of consumption	118
312.	Ganja supplied to Native States	*ib.*
313.	Transport and import of ganja	*ib.*
314.	Exports by sea	119
315.	Distribution of ganja produced in the Presidency	*ib.*
316.	Bhang	120
317.	Charas	*ib.*
318.	Bombay States	*ib.*
319.	Sind	*ib.*
320.	Import of ganja	*ib.*
321.	Import of charas	121
322.	Khairpur	*ib.*
323.	Berar	*ib.*
324.	Ajmere	*ib.*
325.	Coorg	*ib.*
326.	Baluchistan	122
327.	Burma	*ib.*
328.	Mysore	*ib.*
329.	Hyderabad	*ib.*
330.	Rajputana	123
331.	Central India	125
332.	Baroda	*ib.*
333.	Kashmir	*ib.*
334.	Nepal	126

CHAPTER VIII.

EXTENT OF USE AND THE MANNER AND FORMS IN WHICH THE HEMP DRUGS ARE CONSUMED.

335.	Bengal: Quality of statistics	127
336.	Consumption compared with population of ganja	*ib.*
337.	Consumption of ganja in Calcutta	128
338.	Consumption of ganja in the districts	*ib.*
339.	Tracts in which different degrees of use prevail of ganja	*ib.*
340.	Area of heavier consumption of ganja marked off	129
341.	Incidence of consumption in the whole population	*ib.*
342.	Individual consumption of ganja	*ib.*
343.	Proportion of excessive consumers of ganja	130
344.	The standard of average moderate consumption of ganja	*ib.*
345.	Number of consumers estimated	132
346.	Extent of use of bhang	*ib.*
347.	Use of bhang in parts of the province	*ib.*
348.	Individual consumption of bhang	133
349.	Extent of use of charas	*ib.*
350.	Sales to retail vendors	*ib.*
351.	Reasons for local increase or decrease	134
352.	Kuch Behar	135
353.	Tributary States of Chota Nagpur and Orissa and Hill Tippera ...	*ib.*
354.	North-Western Provinces: The use of the three forms of the drug in various parts	*ib.*
355.	Consumption compared with population of ganja	*ib.*
356.	Individual consumption of ganja	136
357.	Extent of use of charas	*ib.*

PARA.		PAGE.
358.	Extent of use of bhang	136
359.	Increase and decrease	*ib.*
360.	Connection between the use of liquor and hemp drugs	137
361.	Increase of revenue due to improved administration	*ib.*
362.	Direct testimony as to increase	*ib.*
363.	Direct evidence of decrease	138
364.	Competition between ganja and charas	*ib.*
365.	Rampur:	
	Extent of use of the drugs	*ib.*
366.	Tehri Garhwal:	
	Extent of use of the drugs	*ib.*
367.	Punjab:	
	Extent of use: Charas and bhang are used, not ganja	*ib.*
368.	Extent of use of charas	139
369.	Individual consumption of charas	*ib.*
370.	Extent of use of bhang	*ib.*
371.	Estimate of number of bhang consumers	140
372.	Increase and decrease: The evidence of the statistics	*ib.*
373.	Bhang	*ib.*
374.	Evidence regarding charas	141
375.	Punjab State:	
	Extent of use	*ib.*
376.	Central Provinces:	
	The statistics of 1892-93 relied upon	142
377.	The use of ganja compared by districts	143
378.	Estimate of individual consumption of ganja	*ib.*
379.	Increase of use of ganja	*ib.*
380.	Increase on the balance of evidence	144
381.	Feudatory States:	
	Extent of use	*ib.*
382.	Madras	*ib.*
383.	The statistics of retail sale do not show the full consumption of ganja	145
384.	Use of ganja in different parts of the Presidency	*ib.*
385.	The number of consumers of ganja	*ib.*
386.	Increase and decrease of use of ganja	146
387.	Madras States	*ib.*
388.	Bombay	*ib.*
389.	Use in different parts of the Presidency of ganja	*ib.*
390.	Total consumption of ganja	*ib.*
391.	Individual allowance of ganja	147
392.	Number of regular consumers estimated	*ib.*
393.	Figures of retail sale not generally reliable as index of consumption ...	*ib.*
394.	Increase and decrease of consumption	148
395.	Bombay States	*ib.*
396.	Aden	*ib.*
397.	Sind and Khairpur:	
	Total consumption estimated of bhang	149
398.	Individual allowance:	
	Number of regular consumers of bhang	*ib.*
399.	Number of consumers of charas	*ib.*
400.	Number of consumers of ganja	150
401.	Increase of consumption	*ib.*
402.	Berar	*ib.*
403.	Ajmere-Merwara	151
404.	Coorg	*ib.*
405.	Baluchistan	*ib.*

PARA.		PAGE.
406.	Burma	151
407.	Hyderabad, Mysore, Rajputana, Central India, and Baroda ...	*ib.*
408.	Kashmir and Nepal	152
409.	Army:	
	Real extent of the use of the hemp drugs not ascertained ...	*ib.*
410.	Extent of use reported	*ib.*
411.	Little evidence of excessive use	153
412.	Use of the different drugs	*ib.*
413.	Use among principal castes of sepoys	*ib.*
414.	Evidence indicates decrease of use in the Army	*ib.*
415.	Varieties of ganja	154
416.	Manner of smoking ganja	*ib.*
417.	Manner of smoking charas	155
418.	Other ways of smoking	*ib.*
419.	Mixture of spices in smoking	*ib.*
420.	Mixture of potent drugs in smoking	156
421.	Simple preparation for drinking	*ib.*
422.	Spiced preparations for drinking	*ib.*
423.	Mixture of potent drugs for drinking	157
424.	Curious ingredients for drinking	*ib.*
425.	Use of hemp drugs with alcohol	*ib.*
426.	Boja	*ib.*
427.	Hemp decoctions sometimes kept ready made	*ib.*
428.	Simple form of eating hemp	158
429.	Hemp sweetmeats	*ib.*
430.	Various ways of using hemp for consumption	*ib.*

CHAPTER IX.

Social and Religious Customs.

431.	Scope of this chapter	159
432.	Bengal	*ib.*
433.	Durga Puja	*ib.*
434.	Other occasions on which bhang is used	160
435.	Connection of ganja with the worship of Siva	*ib.*
436.	Trinath	161
437.	Muhammadans	*ib.*
438.	Assam	*ib.*
439.	North-Western Provinces	*ib.*
440.	Punjab	162
441.	Central Provinces	163
442.	Madras	*ib.*
443.	Bombay	164
444.	Sind	*ib.*
445.	Berar	165
446.	Ajmere-Merwara	*ib.*
447.	Baluchistan	*ib.*
448.	Native States	*ib.*
449.	Worship of the hemp plant	*ib.*
450.	General conclusions	166

CHAPTER X.

Effects—General Observations.

451.	Prevailing ignorance of the effects	167
452.	Bias of certain witnesses	168

PARA.		PAGE.
453.	Ganja and charas compared	169
454.	Flat, round, and chur ganja	170
455.	Smoking and drinking or eating	*ib.*
456.	Admixtures	171
457.	Dhatura	172
458.	Medicinal use	174
459.	Ancient literature	*ib.*
460.	Modern native practice	175
461.	Treatment of disease	176
462.	Therapeutics	177
463.	Pulmonary sedative ... ... / Asthma and bronchitis ... ... } ...	*ib.*
464.	Diuretic action	178
465.	Tonic and other effects	179
466.	Aphrodisiac action	*ib.*
467.	Cattle-disease	180
468.	Is moderate use beneficial?	*ib.*
469.	Food accessory or digestive	181
470.	To give staying power	*ib.*
471.	Febrifuge	182
472.	Other beneficial effects	*ib.*
473.	Contrary evidence	*ib.*
474.	Is moderate use harmless?	183
475.	Ganja	184
476.	Bhang	*ib.*
477.	Silent witnesses	*ib.*
478.	Formation of the habit	*ib.*
479.	Strength of habit	185
480.	Moderation and excess	*ib.*
481.	Hereditary tendency	186
482.	Physiological action of the drugs	*ib.*
483.	Dr. Cunningham's experiment on ganja inhalation	188
484.	All three forms of the drug considered together	191
485.	Immediate effects	*ib.*
486.	Duration of these effects	192
487.	After effects	193
488.	Classes who use the drugs as stimulants	194
489.	Popular opinion regarding this use	*ib.*
490.	Hemp drugs and alcohol	195
491.	Injurious effects of hemp drugs (history)	197
492.	Effects in other countries	199
493.	Failure of witnesses to distinguish excessive from moderate use ...	*ib.*
494.	Medical witnesses	*ib.*
495.	General view of the whole evidence regarding evil effects ...	200
496.	The general character of the evidence	201
497.	The necessity for testing it	*ib.*
498.	Limitation of the issues raised	202

CHAPTER XI.

EFFECTS—PHYSICAL.

499.	Medical evidence regarding dysentery, bronchitis, and asthma ...	205
500.	Bengal	*ib.*
501.	Assam	208

PARA. PAGE.

502. North-Western Provinces 209
503. Punjab 214
504. Central Provinces 216
505. Madras ... ... *ib.*
506. Bombay 219
507. Sind 221
508. Burma ... ... *ib.*
509. Berar, etc.. 222
510. Summary of the evidence 223
511. General effects of excessive use ... ... *ib.*

CHAPTER XII.

EFFECTS—MENTAL.

512. Insanity 225
513. Popular impression ... ... *ib.*
514. Difficulty of getting accurate information 226
515. Asylum statistics 227
516. Statistics are based on the descriptive rolls 230
517. Untrustworthiness of descriptive rolls ... ... *ib.*
518. Asylum statistics quite untrustworthy 233
519. Dacca Asylum no exception ... ... *ib.*
520. Explanation of the use of these worthless statistics 236
521. Further inquiries made by the Commission 237
522. Mixed cases 239
523. Heredity ... ... *ib.*
524. Alcohol 240
525. Dhatura 241
526. Cases due to hemp drugs ... ... *ib.*
527. Classification and types of accepted cases 242
528. Occupation ... ... *ib.*
529. Liability at various ages and relapses 243
530. Duration of insanity ... ... *ib.*
531. Proportion of recoveries 245
532. Mortality ... ... *ib.*
533. Symptomatology ... ... *ib.*
534. Post-mortem examinations 247
535. Diagnosis of hemp drug insanity ... ... *ib.*
536. Summary of conclusions regarding hemp drug insanity 249
537. Cerebral stimulants 251
538. Legrain's description of poisons of the mind 252
539. Intoxication and insanity 254

CHAPTER XIII.

EFFECTS—MORAL: GENERAL SUMMARY OF CONCLUSIONS.

540. Social effects 255
541. Are consumers offensive to their neighbours? ... ... *ib.*
542. Connection of hemp drugs with crime ... ... *ib.*
543. Bad characters 256
544. Do criminals fortify themselves with these drugs? ... ... *ib.*
545. Do criminals administer them to their victims? 257
546. Evidence that excessive consumption is not connected with unpremeditated crimes, especially crimes of violence ... ... *ib.*

PARA. PAGE.

547. Evidence to the contrary 258
548. Cases referred to 259
549. Cases in which the record has not been called for 260
550. Cases in which the records were examined ... ... *ib.*
551. Results of the examination of these cases 263
552. Summary of conclusions regarding effects ... ... *ib.*

CHAPTER XIV.

THE POLICY OF HEMP DRUG ADMINISTRATION.

553. General principles regarding sumptuary laws and their application to India 265
554. The question of entirely suppressing all intoxicants 266
555. Not laid before the Commission ... ... *ib.*
556. The past history of the case how far to be relied upon 267
557. Prohibition in other countries 269
558. Turkey 270
559. Egypt ... ... *ib.*
560. Greece 271
561. Trinidad ... ... *ib.*
562. Basis of prohibition and results in these countries ... ... *ib.*
563. Is prohibition in India justifiable, feasible, and advisable? ... *ib.*
564. Prohibition of bhang 272
565. Prohibition of ganja and charas ... ... *ib.*
566. The evidence regarding prohibition of ganja and charas may be considered together ... ... *ib.*
567. Supply of ganja and charas in its relation to prohibition 273
568. Opinions of the witnesses regarding prohibition of ganja and charas ... *ib.*
569. Opinions regarding prohibition of ganja and charas 274
570. Bengal opinions in favour of prohibition of ganja ... ... *ib.*
571. Opinions against prohibition of ganja in Bengal 276
572. Assam :
Opinions in favour of prohibition of ganja 277
573. Opinion against ... ... *ib.*
574. North-Western Provinces :
Opinions in favour of prohibition of ganja and charas 278
575. Opinions against prohibition ... ... *ib.*
576. Punjab :
Opinions for prohibition of charas 279
577. Opinions against prohibition of charas 281
578. Central Provinces :
Opinions in favour of the prohibition of ganja 282
579. Opinions against prohibition of ganja ... ... *ib.*
580. Madras :
Opinions in favour of the prohibition of ganja 283
581. Opinions against prohibition 284
582. Bombay :
Opinions in favour of prohibition of ganja ... ... *ib.*
583. Opinions against prohibition 285
584. Berar, etc. 986
585. General conclusions in regard to total prohibition of ganja, charas, and bhang ... ... *ib.*
586. Policy in regard to hemp drugs 287
587. Objection to raising revenue from hemp drugs ... ... *ib.*
588. Systematic treatment necessary 288

PARA. PAGE.

589. Question of introducing a Government monopoly for hemp drugs discussed 289
590. Supervision by Government of India necessary 290

CHAPTER XV.

EXISTING SYSTEMS DESCRIBED.

591. Systems of excise in the various provinces 291
592. Bengal :
Law in force ... ... *ib.*
593. Manufacture not defined 292
594. The system in Bengal: Rajshahi ganja ... ... *ib.*
595. Where the existing practice differs from the rules 293
596. Garhjat ganja and illicit practices ... ... *ib.*
597. Charas 294
598. Bhang ... ... *ib.*
599. Wholesale vend 295
600. Retail vend ... ... *ib.*
601. Taxation ... ... *ib.*
602. Assam :
Law in force 296
603. Supply of the drugs ... ... *ib.*
604. System of vend and taxation 297
605. North-Western Provinces:
Law in force ... ... *ib.*
606. Supply of the drugs ... ... *ib.*
607. Imports of the drugs 298
608. Smuggling ... ... *ib.*
609. Defect in the North-Western Provinces system of supply... ... *ib.*
610. System of vend ... ... *ib.*
611. Statistics 299
612. Punjab :
Law in force ... ...
Supply of the drugs ... ... } *ib.*
613. Import and transport ... ... *ib.*
614. Excise system 300
615. Proposal to tax charas and bhang 301
616. Central Provinces:
Law in force ... ... *ib.*
617. Supply of the drugs ... ... *ib.*
618. Khandwa ganja ... ... *ib.*
619. Wholesale vend 302
620. Retail vend ... ... *ib.*
621. Statistics ... ... *ib.*
622. Madras :
Law in force 303
623. Supply of the drugs 304
624. System of excise ... ... *ib.*
625. Bombay :
Law in force 305
626. Sources of supply in Bombay 306
627. System of vend in Bombay ... ... *ib.*
628. Sind ... ... *ib.*
629. Aden 307
630. Berar ... ... *ib.*

PARA. PAGE.

631. Ajmere, Coorg, and Quetta-Pishin 307
632. Summary of systems ... ... *ib.*

CHAPTER XVI.

PROVINCIAL SYSTEMS EXAMINED.

633. Scope of this chapter 309
634. Farm of monopoly of vend not sufficient ... ... *ib.*
635. Combination of direct duty with auction of licenses the best system ... *ib.*
636. Control of cultivation 310
637. Limitation of shops ... ... *ib.*
638. Artificial checks not desirable ... ... *ib.*
639. Prices of the drugs ... ... *ib.*
640. Ganja administration in Bengal 312
641. Results obtained 313
642. Weak points in Bengal system ... ... *ib.*
643. Storage ... ... *ib.*
644. Smuggling in Orissa 314
645. Reduction of all ganja to chur ... ... *ib.*
646. Ganja administration in the Central Provinces 315
647. Table showing the results of the ganja administration from 1882-83 to 1892-93 316
648. Review of Central Provinces system ... ... *ib.*
649. Ganja exported to other provinces and Native States should pay duty 317
650. Duty should be raised also on ganja consumed in the province ... *ib.*
651. The system of supplying ganja to retail vendors at a fixed price ... *ib.*
652. Advantages claimed for the system 318
653. Disadvantages of the system ... ... *ib.*
654. Its abolition recommended 319
655. Storage of ganja and increase in number of wholesale vendors .... *ib.*
656. Assimilation of the Bengal and Central Provinces systems 320
657. North-Western Provinces ... ... *ib.*
658. Madras and Bombay 321
659. Compared with Bengal and the Central Provinces ... ... *ib.*
660. History of the subject in Madras 322
661. Treatment of the subject in Bombay... 323
662. Control of cultivation for ganja ... ... *ib.*
663. Restriction of area of cultivation 324
664. Objection as regards private cultivation ... ... *ib.*
665. Objection as regards wild growth in Madras and Bombay ... ... *ib.*
666. Objection as regards Native States ... ... *ib.*
667. Evidence relating to control of cultivation in Madras 325
668. Bombay 326
669. Supervision of the manufacture and storage of the crop required with a view to imposition of duty ... ... *ib.*
670. Levy of duty in Madras and Bombay ... ... *ib.*
671. Recommendations regarding taxation of ganja in Madras and Bombay ... 327
672. Berar 328
673. Ajmere, Coorg, and Quetta-Peshin ... ... *ib.*
674. Taxation of charas ... ... *ib.*
675. Transport of charas and inter-provincial arrangements 329
676. Control of bhang ... ... *ib.*
677. Recommendations for its control and taxation 330
678. Distribution of the hemp drugs to retail vendors ... ... *ib.*

PARA.		PAGE.
679.	Import, export, and transport duties...	331
680.	Retail vend :	
	(*a*) Separation of licenses for different kinds of drugs	*ib.*
681.	(*b*) Separate sale of shops	332
682.	(*c*) Grant of retail licenses to wholesale vendors	*ib.*
683.	(*d*) Licensing of shops	*ib.*
684.	(*e*) Consumption on the premises	333
685.	Local option : Law regarding—	334
686.	Evidence of revenue authorities regarding local option	*ib.*
687.	Other evidence	336
688.	Commission's view of local option	*ib.*
689.	Maximum of possession	*ib.*
690.	The Commission's view	337
691.	Taxation of hemp drugs according to strength	338
692.	Burma :	
	History of prohibition	*ib.*
693.	Smuggling of ganja in Burma	340
694.	Failure of prohibition	341
695.	Conclusions of the Commission regarding Burma	*ib.*

CHAPTER XVII.

SYSTEMS OF NATIVE STATES.

696.	Systems in Native States	343
697.	States in the Himalayan tract where the plant grows wild	*ib.*
698.	In other States the production of ganja is the most important feature ...	*ib.*
699.	Hyderabad	344
700.	Mysore	*ib.*
701.	Baluchistan	345
702.	Baroda	*ib.*
703.	Central India Agency	346
704.	Indore	*ib.*
705.	Gwalior	347
706.	Bhopal	*ib.*
707.	Baghelkhand Agency	*ib.*
708.	Bundelkhand Agency	*ib.*
709.	Bhopawar Agency	348
710.	Western Malwa Agency	*ib.*
711.	Rajputana Agency :	
	Jeypore	*ib.*
712.	Jodhpur	*ib.*
713.	Udaipur	349
714.	Bikanir	*ib.*
715.	Alwar	*ib.*
716.	Bhartpur	*ib.*
717.	Kotah	350
718.	Tonk	*ib.*
719.	Jhallawar	*ib.*
720.	Bundi	*ib.*
721.	Dholpur	*ib.*
722.	Banswara	351
723.	Sirohi	*ib.*
724.	Kerowli	*ib.*
725.	Kishengarh	*ib.*
726.	Jaisalmir	*ib.*

PARA. PAGE.

727. Shahpura 351
728. Partabgarh and Lawa 352
729. Hill States lying between Bengal, the Central Provinces, Madras ... *ib.*
730. Tributary States of the Central Provinces ... ... *ib.*
731. Tributary States of Chota Nagpur 353
732. Tributary States of Orissa ... ... *ib.*
733. Remarks on the administration of Orissa Tributary States 356
734. Agency Tracts of Madras ... ... *ib.*
735. Punjab Native States 357
736. Madras Native States ... ... *ib.*
737. Bombay Native States ... ... *ib.*
738. Khairpur in Sind ... ... *ib.*
739. Commission's recommendation in regard to Native States generally ... 358

CHAPTER XVIII.

SUMMARY.

740. Conclusions arrived at by the Commission 359
741. Suggestions made by the Commission 360
742. Suggestions regarding Burma 361

Note of dissent by Raja Soshi Sikhareswar Roy 363
Note of dissent by Lala Nihal Chand 383

REPORT

OF THE

INDIAN HEMP DRUGS COMMISSION.

1893-94.

CHAPTER I.

INTRODUCTORY.

Appointment of the Commission: its object.

1. The Indian Hemp Drugs Commission was appointed under the orders of His Excellency the Governor-General in Council contained in the Resolution of the Government of India, Finance and Commerce Department, No. 2792-Ex., dated 3rd July 1893. In a despatch No. 36 (Revenue), dated 16th March 1893, Her Majesty's Secretary of State informed the Government of India that in answer to a question* put in the House of Commons he had expressed his willingness to request the Government of India to appoint a Commission to inquire into the cultivation of the hemp plant in Bengal, the preparation of drugs from it, the trade in those drugs, the effect of their consumption upon the social and moral condition of the people, and the desirability of prohibiting the growth of the plant and the sale of ganja and allied drugs. In requesting the Government of India to appoint a Commission for the purposes stated, the Secretary of State desired that such instructions might be issued as would ensure that the inquiry should be thorough and complete. Lord Kimberley was of opinion that the inquiry could hardly be confined to Bengal, but should extend to the whole of India, and that the Commission should ascertain to what extent the existence of the hemp plant all over India affects the practical difficulty of checking or stopping the consumption of ganja as distinguished from other narcotic drugs prepared from the hemp plant, and whether there is ground for the statement that bhang is less injurious than ganja to consumers.

Constitution of the Commission.

2. The Commission appointed by the Government of India Resolution of 3rd July 1893 consisted of a President and six Members, three of whom were officials and three Native non-official gentlemen. Under subsequent orders, a Secretary to the Commission was appointed.†

---

* By Mr. W. S. Caine on 2nd March 1893.

† *President:*

The Hon'ble W. MACKWORTH YOUNG, M.A., C.S.I., First Financial Commissioner, Punjab.

Members:

1. Mr. H. T. OMMANNEY, Collector, Panch Mahals, Bombay.
2. Mr. A. H. L. FRASER, M.A., Commissioner, Chhattisgarh Division, Central Provinces.
3. Surgeon-Major C. J. H. WARDEN, Professor of Chemistry, Medical College, and Chemical Examiner to Government, Calcutta; Officiating Medical Storekeeper to Government, Calcutta.
4. Raja SOSHI SIKHARESWAR ROY, of Tahirpur, Bengal.
5. KANWAR HARNAM SINGH, Ahluwalia, C.I.E., Punjab.
6. LALA NIHAL CHAND, of Muzaffarnagar, North-Western Provinces.

Secretary:

Mr. H. J. McIntosh, Under-Secretary to the Government of Bengal, Financial and Municipal Departments.

3. In pursuance of the wishes of the Secretary of State, the following instructions were issued to the Commission:—

Instructions to the Commission—

"His Excellency the Governor-General in Council desires that the inquiry should be thorough and searching, but he leaves to the Commission full discretion to determine the best means of securing that result. Certain instructions are given in the following paragraphs; but these are not intended to be exhaustive, and the Commission have full authority to take up any branch of inquiry which in their opinion is likely to elucidate the subject and to aid the Government of India and the Secretary of State in deciding on the policy to be adopted in regard to hemp drugs.

(a) Scope of inquiry.

"It is desirable that the Commission should visit and take evidence in all or most of the provinces of India: there are political objections to their holding sittings in Native States, but any information similar to that required regarding British India which can be obtained regarding Native States should be included in the Report.

"The Commission should ascertain, with as much precision as possible, the extent to which the hemp plant is cultivated in each of the provinces of India in which it is grown. They should collect full information as to the manner in which the plant is cultivated for the production of drugs and the methods of preparing the manufactured drug from the raw product, whether of the wild or the domesticated plant. Little is known at present as to the extent to which the wild plant can be used for the preparation of drugs, whether in the milder or the more noxious forms. This point has an important bearing on the possibility of introducing restrictive measures, and will require careful investigation. Full particulars should be obtained regarding all the different forms of the drug which are commonly used, especially ganja, charas, and bhang; and regarding the classes of the people by whom, and the extent to which, each is used. The physical and other effects of the use of hemp drugs should be thoroughly investigated, each variety of the drug being separately treated, so far as that can be conveniently done. In conducting this branch of the inquiry, the Commissioners should avail themselves freely of the evidence of medical experts. They should endeavour to ascertain what proportion of the population habitually consumes hemp drugs, and should thoroughly examine the testimony in support of the commonly received opinion that the use of hemp drugs is a frequent cause of lunacy. They should ascertain whether, and in what form, the consumption of the drugs is either harmless or even beneficial as has occasionally been maintained.

(b) Cultivation and wild growth of the hemp plant, manufacture and use of drugs obtained therefrom, and the physical and other effects of the use of hemp drugs.

"Full information should be compiled regarding the administrative arrangements in force in each province for controlling the growth of the plant, the manufacture and sale of the drugs, and their importation from other provinces or from Native States, and for imposing duties on cultivation and sale. It is understood that charas is imported into the Punjab on a considerable scale from foreign territory; and the question of the importation of hemp drugs generally from foreign territory should receive the special attention of the Commission. The various systems

(c) Methods of administration.

employed for taxing the drug or the cultivation of the plant should be reviewed with special reference to the comparative incidence of this taxation in different parts of India and to the comparative efficacy of the taxation imposed in restricting consumption, whether by the mere weight of the tax or by the method and stage of imposition. It is known that the rates vary considerably in different provinces, but the precise effect of the variations is not fully understood. In this connection the Commissioners should notice any case in which the proximity of a Native State affects the production or consumption of the drug in British territory.

(*d*) Political discontent, social or religious usage, and other stimulants or narcotics.

"There are two points connected with the subject-matter of the inquiry which call for special investigation. The first of these is the danger lest prohibition, or restrictive measures of a stringent character, may give rise to serious discontent, and be resented by the people as an unjustifiable interference with long-established social customs. In some parts of India the use of hemp drugs is, it is believed, common among fakirs and ascetics held in veneration by large classes of the population. In Bengal it has been stated that an infusion of the leaves of the plant is commonly offered to every guest and member of the family on the last day of the Durga Puja: it has no ill effects, and its use is not considered reprehensible in any way. The Governor-General in Council desires that the Commissioners will endeavour to ascertain to what extent these and similar customs prevail in Bengal and other parts of India, and how far the use of hemp drugs forms a part of social, or possibly religious, ceremonial or observance, and they should, if possible, take the evidence of witnesses drawn from the classes among whom the use of hemp drugs is chiefly prevalent. The Commissioners should state their opinion whether the prohibition of the use of hemp drugs or any restrictive measures which they may deem practicable would be likely to give rise to political discontent in any parts of India or among any classes of the population. It is believed that in some parts of the country bhang is, in a special degree, the poor man's narcotic, and the possible unpopularity of a measure which would deprive the very poorest of the population of the use of a narcotic to which they have always been accustomed should not be overlooked.

"Another point to which the attention of the Commissioners should be directed is the probability or possibility that, if the use of hemp drugs is prohibited, those who would otherwise continue to use them may be driven to have recourse to alcohol, or to other stimulants or narcotics which may be more deleterious.

(*e*) Recommendations of the Commission.

"Finally, the Governor-General in Council requests that the Commissioners, if they should be of opinion that the prohibition of the consumption of any hemp drug should not, or could not, be enforced, will indicate, for the consideration of the Government of India, any reforms and improvements which their investigations may lead them to recommend in the existing arrangements of each province for controlling the cultivation of the hemp plant, and the manufacture, sale, and taxation of hemp drugs. In framing their recommendations, regard should, of course, be had to the considerations which have been stated in paragraphs 7 and 8 of this Resolution. Absolute prohibition, or repressive measures of a stringent nature, may involve inquisitorial proceedings of an unpopular character, and

afford opportunities for the levy of blackmail; and in framing regulations for the prohibition or for the restriction of the use of hemp drugs, these considerations should be borne in mind.

"If the Commission should be of opinion that the cultivation of the hemp plant for the production of drugs, or the consumption of any hemp drug, should be absolutely prohibited, it will be their duty to state the regulations which should be adopted for this purpose."

Commission's method of inquiry.

4. Under the terms of the Resolution appointing the Commission, they were directed to assemble in Calcutta on the 1st August 1893. The first collective meeting of the Commission actually took place on the 3rd August 1893. A series of questions was drawn up by the Commission for distribution to witnesses. The series of questions was prefaced by an explanatory note, in which it was carefully pointed out that they were not to be regarded as exhaustive, but were intended rather to serve as an index to the witnesses as to the subjects to which their attention should be specially directed. The witnesses were requested not to withhold any information merely because it was not indicated by any of the questions. They were invited to give any information which did not appear to fall under any of the questions, either by appending it as a separate note to the chapter under which it seemed naturally to fall, or by recording it at the end of the evidence. At the same time, as the questions were necessarily of wide and general application, it was pointed out that it was not intended that in every case the witness should answer all of them, but should confine himself to those questions which dealt with parts of the subject with which he was more or less acquainted; and, to enable the Commission to estimate the value of the information given, it was requested that the witness should indicate the source of his information and the facts or experiences on which he based his opinions and statements.

Invitation to persons interested to lay their views before the Commission.

5. Previous to issuing their series of questions to Local Governments and Administrations for distribution to witnesses, the Commission had intimated to them that they were anxious to receive evidence from well-informed persons and representative associations, whether philanthropic, religious, or social bodies, who desired to see the preparation and sale of ganja and other hemp drugs further restricted or entirely prohibited, and that it was necessary to give such persons and associations the freest opportunity of coming forward and laying their views before the Commission. To enable these persons and associations to place themselves in communication with the Commission, Local Governments and Administrations were requested to make it widely known through the Press, or in such other manner as might be suitable, that the Commission would be glad to receive written statements of their views, accompanied by an intimation as to whether the writer, or, in the case of an association or public body, a representative, would be willing to appear before the Commission for oral examination. The Commission themselves also addressed direct a number of associations and persons who were likely to be interested in the inquiry, and further communicated to the Press through Local Governments and Administrations a letter setting forth the wishes of the Commission in respect to such persons, and intimating, for the information of the public, their proposed movements and the method of their inquiry.

Selection of witnesses by Local Governments.

6. In circulating their questions to Local Governments and Administrations for distribution to suitable witnesses, the Commission took pains to explain that they attached much importance to a due proportion of non-official witnesses being selected, and requested that in the first place copies of the questions should be supplied to the persons or associations advocating restriction who might have availed themselves of the invitation to come forward and lay their views before the Commission. Should such persons or associations have held direct communication with the Commission, steps were taken by the Commission themselves to supply them with copies of the questions. In addition to this class of witnesses, Local Governments and Administrations were asked to place copies of the questions in the hands of official and non-official persons, European and Native, who either had special knowledge of the subject, or special facilities and aptitude for acquiring such knowledge. The classes of persons whose evidence the Commission desired to receive included revenue officers of experience, magisterial officers, police officers, medical officers, officers acquainted with special races of the people, zamindars, employers of labour, and the lower grades of officials, professional men, and missionaries of all denominations. Regarding the latter class, every effort was put forth by the Commission to obtain missionary opinion on the subject of their inquiries, and it is a matter of some regret to them that their efforts have met with but little success. Not only was it announced through Local Governments that the Commission desired to receive communications from religious bodies of all denominations, but the Commission themselves also communicated freely with persons of this class. But the large majority of them declined to come forward as witnesses, and many, including Churchmen, Dissenters, and Roman Catholics, communicated letters either to Government or direct to the Commission excusing themselves on the ground of want of knowledge. As an example of the want of knowledge of the subject or lack of interest in the inquiry evinced by missionaries, it may be observed that in one instance (in the Madras Presidency) the Commission made over 70 copies of their questions to two sects of missionaries professing to represent one-fifth of the whole missionary enterprise of the Madras Presidency. Yet the total number of missionaries in this Presidency who sent in answers or statements to the Commission (though some of them quoted the opinions of others) was only 15, many of whom do not belong to either of the two sects referred to. Special instructions were issued regarding two classes of witnesses. Firstly, in order to secure compliance with the orders of the Government of India that the evidence of medical experts should be freely obtained, it was requested that the questions should be distributed to selected medical officers, both European and Native. Emphasis was laid upon the importance of ascertaining the views of subordinate native medical officers whose duties bring them into contact with the people, and it was suggested that replies should either be obtained separately from competent officers of this class, or that they should be embodied in the replies received from Civil Surgeons. The evidence of private native medical practitioners of repute, especially of those practising after native methods, was also solicited. For the convenience of the medical experts, a separate compilation of the questions dealing only with that part of the subject with which this class of witness would be likely to be acquainted was made, the witnesses being left the option of dealing either with this abbreviated compilation or with the whole series of general ques-

tions as they saw fit. Secondly, attention was drawn to those questions which deal with the connection, causal or otherwise, of hemp drugs with crime with a view to the evidence of selected Magistrates and Police officers being obtained on this subject.

Information from official and other sources.

7. In addition to the evidence of witnesses, the Commission availed themselves freely of all information regarding the subject of their inquiry already existing in official reports and documents as well as in publications of a non-official character. Local Governments and Administrations were invited to furnish complete lists of such official reports and publications, printed copies of those of special importance being submitted. In addition to these, the Commissioner of Excise or Abkari of each province was asked to present a memorandum setting forth in detail the system of administration at present in force in respect to hemp drugs, accompanied by statistics, where available, for the last twenty years in a form drawn up by the Commission. These memoranda and statistics will be found in Vol. III Appendices. Information existing in non-official publications came to the notice of the Commission from many sources, and was utilized when trustworthy or found to be of value.

Preliminary tour: Objects and reasons of—

8. Shortly after assembling in Calcutta, the Commission were convinced that the period which had elapsed between the date of the appointment of the Commission and the date fixed for their assembling at Calcutta was too short to permit of their proceeding at once with the examination of witnesses. Sufficient time had not been allowed to the Commission to become generally acquainted with the system of administration in respect to hemp drugs prevailing in each province, or with the objections taken by certain persons or bodies to such systems. More important still, Local Governments and Administrations required time to enable them to bring before the Commission a selection of witnesses which would be fairly representative of the views and interests involved; and the witnesses themselves, whether selected by Government or coming forward of their own motion, required time to consider the conditions of the problem, and to set forth lucidly and in a manner which would be satisfactory both to themselves and to the Commission the opinions which they might entertain. Accordingly, with these objects in view, the Commission before proceeding to the examination of the witnesses made a preliminary visit to some provinces. The provinces visited, after Bengal, were the North-Western Provinces, the Central Provinces, Bombay, Madras, and the Punjab. Occasion was taken to study the systems in force in these provinces and the objections thereto, and, in communication with the Local Governments, to see that full effect had been given to the wishes of the Commission in the matter of selecting representative witnesses. The lists of witnesses prepared by Local Governments, so far as they were ready, were examined, and in many cases considerable additions were made. These lists were supplemented by increasing not only the number of witnesses selected from the different classes, but also the numbers of classes themselves. Every effort was made after local inquiry and in consultation with Local Governments to secure the representation of all classes and shades of opinion. In view of the ignorance which the Commission found to prevail generally regarding the use and effects of the drugs, it was found necessary to have a larger number of witnesses in every province

than was at first anticipated. During this tour this Commission as a whole, or in some cases Sub-Committees of the Commission, visited the head-quarters of some of the more important Native States to make arrangements for the collection of information in these States as desired by the Government of India. Opportunity was also taken by the Commission at this period of their inquiries to get at facts and opinions in an informal way; and with this object in view many visits were made by the Commission, or by members of the Commission (generally unexpectedly and under the guidance of private persons as well as of officials), to see cultivation and manufacture of hemp drugs, to warehouses and to shops where these drugs are stored and sold, and to religious places and other places of resort where the drugs are consumed in some form or other. The results of these inquiries were sometimes recorded in notes, and sometimes in the statements of persons who were then added to the list of witnesses. Inquiries were also held at many asylums, as will be explained in the following paragraph, which deals with the special inquiries made by the Commission in this direction.

Lunatic Asylums.

9. The Commission were especially enjoined to thoroughly examine the testimony in support of the commonly received opinion that the use of hemp drugs is a frequent cause of lunacy, and with this object have made very searching inquiries. In order to make this very important branch of their labours as complete and searching as possible, the procedure adopted in the different asylums of India in classifying and dealing with cases of insanity ascribed to the use of hemp drugs was specially examined, and the connection, whether causal or otherwise, between hemp drugs and insanity was investigated in minute detail. Every asylum in British India was visited either by the Commission or by some members of the Commission, and careful inquiries were conducted on the spot in every case of insanity attributed to the use of hemp drugs for a given period. The period selected for the whole of India was the calendar year 1892, the last year for which statistics were available at the commencement of the Commission's labours. Every case of insanity ascribed to hemp drugs in the asylums of India during the year 1892 has been specially inquired into in the asylum where the patient was confined, the papers and records of the case have been thoroughly examined, and instructions were issued to have a further local inquiry made by an experienced Magistrate, in consultation with the Civil Surgeon, to ascertain the past personal and family history of the patient and any circumstances likely to throw light on the cause of his insanity. The record of this inquiry, where made, has been submitted to the Commission through the Superintendent of the asylum concerned, who has thus had an opportunity of reconsidering the case with fuller information before him on which to base an opinion as to the cause of the insanity. Further, the statistics of insanity and the method of preparing and compiling these statistics have been subjected to a rigid scrutiny, and no opportunity has been lost of obtaining the evidence of medical experts, including Government officers, private practitioners of all classes, and Superintendents of Lunatic Asylums and their subordinates, as well as of non-professional persons, as to the relation between hemp drugs and insanity. The Commission have endeavoured to investigate and weigh the popular as well as the scientific view of this subject.

Connection between hemp drugs and violent crime.

10. In regard to the alleged connection between hemp drugs and violent crime, the Commission, in addition to sifting the written and oral evidence, have examined the judicial and other records of cases which have been alluded to by the witnesses as forming the basis, or part of the basis, on which their opinions were framed.

Native States.

11. As stated above, the Commission were precluded by the orders of the Government of India from holding formal sittings in Native States, but nevertheless they have endeavoured to obtain full and complete information from all the most important Native States in India. In the case of Native States in political relation with the Government of India, the Commission, in some cases in personal communication with the Agent to the Governor-General or the Resident, and in other cases by letter, arranged for the collection of the required information. In some of the larger Agencies and States special officers were appointed, through the courtesy of the Agent to the Governor-General or the Darbar, to collect and compile the available information, and much useful information has thereby been placed at the disposal of the Commission. In the smaller States, and in States under the political control of Local Governments, a memorandum of the system in force, together with statistics so far as available, has generally been furnished by the Political Agent or a responsible officer of the State. Beyond giving the States in question such advice and assistance as they desired in respect to the best methods of conducting their inquiries, indicating clearly the points on which information was desired and supplying lists of questions where required, the Commission did not interfere in any way with the course of these inquiries or select or examine witnesses for themselves.

The Army.

12. One of the most important questions with which the Commission had to deal was the investigation of the proportion of the population which indulges in the use of hemp drugs, and of the classes among whom the use is prevalent. The Native Army appeared to offer a suitable field for inquiry in regard to this matter, and accordingly, with the permission of His Excellency the Commander-in-Chief, a series of questions dealing with this and other questions bearing upon the Commission's investigations was issued to all regiments of the British Native Army. The inquiries were made and the answers filled in by the Commanding Officers either with or without the assistance of their medical officers. The results obtained will be found in Chapter VIII.

Sketch of the proceedings of the Commission.

13. The Commission first assembled at Calcutta on 3rd August 1893, and after agreeing upon their general plan of operations, and concluding their preliminary arrangements, including the distribution of questions to witnesses, started on the preliminary tour described in paragraph 8 above. The provinces visited were the North-Western Provinces, the Central Provinces, Bombay, Madras, and the Punjab. The Commission were in the North-Western Provinces from 22nd August to 1st September, and had their head-quarters at Allahabad, where the principal Revenue officers of Government were assembled to meet them. During this period the asylums at Patna (Bengal), Lucknow, Bareilly, and Lucknow were visited by

various members of the Commission, and one member proceeded to Naini Tal to consult with His Honour the Lieutenant-Governor on behalf of the Commission.

The Central Provinces were visited from 2nd to 11th September, the Commission's head-quarters being at Jubbulpore. The asylums at Jubbulpore and Nagpur were inspected, and some of the members met the Chief Commissioner at Pachmarhi. Some of the members also proceeded to Indore to consult the Agent to the Governor-General, and the Commission as a body had an opportunity of making themselves acquainted with the system of cultivation of the hemp plant for ganja which is centralized at Khandwa. From the Central Provinces the Commission travelled to Poona, where they remained from 12th to 18th September in communication with the Government, and where there was an important asylum to inspect. On the way from Poona to Madras the Resident of Mysore was visited at Bangalore, and inquiries were held at the Dharwar Asylum. At Madras the Commission were occupied from the 22nd to 25th September, after which they broke up into two parties—one proceeding to consult with His Excellency the Governor at Ootacamund, and the other to Hyderabad, where important arrangements had to be made for collecting information from that State. Inquiries were also held at the Madras and Hyderabad Asylums.

The two parties rejoined at Bombay on the 30th September, and then proceeded to Simla, where the head-quarters of the Punjab Government were located. On the journey one part of the Commission stopped at Baroda and Mount Abu to arrange for the collection of information in Baroda and the Rajputana States, while another party held inquiries at the asylums at Colaba, Ahmedabad, and Delhi. At Simla the Commission had their head-quarters from 7th to 24th October, during which interval two members paid flying visits to Lahore, Hyderabad (Sind), and Karachi to inspect the asylums at the two former places and to complete the arrangements made in Sind for the proper selection of witnesses.

The second tour, which was mainly devoted to the examination of witnesses, lasted from 25th October to 25th April. The various provinces were visited in the following order, and witnesses were examined at the centres named on the dates mentioned against each :—

Province.	Centre.	Dates on which witnesses were examined.
Central Provinces ...	Khandwa ...	27th October.
	Nagpur ...	30th and 31st October and 2nd November.
	Raipur ...	4th and 6th November.
	Jubbulpore ...	9th, 10th, 11th, and 13th November.
North-Western Provinces and Oudh.	Meerut ...	16th, 17th, 20th, and 21st November.
	Agra ...	22nd, 23rd, and 25th November.
	Lucknow ...	27th, 28th, 29th, and 30th November and 1st December.
	Allahabad ...	4th, 5th, and 6th December.

Province.	Centre.	Dates on which witnesses were examined.
Bombay	Bombay ...	9th, 11th, 12th, and 13th December.
	Poona ...	14th, 15th, and 16th December.
	Bombay ...	18th, 19th, and 20th December.
	Ratnagiri ...	22nd December.
Madras	Calicut ...	28th and 29th December.
	Trichinopoly ...	1st January.
	Madura ...	2nd January.
	Vizagapatam ...	9th, 10th, 11th, and 12th January.
	Madras ...	17th, 18th, 19th, 20th, and 22nd January.
Burma	Mandalay ...	30th and 31st January.
	Rangoon ...	6th, 7th, 8th, and 9th February.
Bengal	Dacca ...	19th and 20th February.
	Calcutta ...	22nd and 23rd February.
	Cuttack ...	26th and 27th February.
	Puri ...	1st March.
Assam	Dhubri ...	9th and 10th March.
	Gauhati ...	12th March.
	Tezpur ...	14th, 15th, and 16th March.
Bengal	Bhagalpur ...	21st, 22nd, 23rd, and 24th March.
	Berhampur ...	26th March.
	Calcutta ...	28th, 29th, 30th, and 31st March, and 2nd, 3rd, 4th, 5th, 6th, and 7th April.
Punjab	Lahore ...	12th, 13th, 14th, 16th, 17th, and 18th April.

Besides examining witnesses, the Commission continued to prosecute their inquiries in asylums during this tour, visiting all asylums which had not been seen during the preliminary tour. The centres chosen for the examination of witnesses were generally selected with a view to the convenience of the majority of the witnesses summoned; but other circumstances, such as the presence of a lunatic asylum or exceptional growth or use of hemp drugs, had some influence on the decision of the Commission in this matter.

Attendance of Members.

14. The following statement shows the attendance of the members of the Commission during the period occupied in inquiry (3rd August 1893 to 25th April 1894):—

Name.	Period of attendance with the Commission.		Number of meetings for examination of witnesses attended.
	(*a*) During the first tour.	(*b*) During the second tour.	
President ...	83 days ...	183 days ...	86
Mr. Ommanney ...	Ditto ...	Ditto ...	85
Mr. Fraser ...	Ditto ...	Ditto ...	85
Dr. Warden ...	Ditto ...	Ditto ...	86
Raja Soshi Sikhareswar Roy.	From 3rd August to 15th September, 44 days.	From 30th October to 24th January, from 14th to 16th February, from 22nd to 24th February, and from 7th to 25th March, 112 days.	44
Kanwar Harnam Singh ...	83 days ...	From 13th November to 5th January, 22nd February to 2nd April, and from 12th to 25th April, 78 days.	48
Lala Nihal Chand ...	3rd August to 20th September, 49 days.	From 30th October to 18th November and from 17th to 25th April, 29 days.	5

The attendance of Raja Soshi Sikhareswar Roy was broken by occasional absence caused by ill-health and other reasons. The absence of Kanwar Harnam Singh during two short periods was due to ill-health. The prolonged absence of Lala Nihal Chand was due to the fact that he suffered from continued ill-health, and was able to be with the Commission only at Calcutta at the first; then for some part of their preliminary tour, and at a few meetings for the examination of witnesses during the second tour. All the members were present at Simla during the preparation of the report.

The witnesses.

15. The witnesses whose evidence has been received by the Commission may be practically divided into three classes:—

(1) Official witnesses able to give information regarding hemp drugs, based on their official and local experience.

(2) Non-official witnesses of all ranks able to give information regarding the drugs generally or in connection with certain classes of the people.

(3) Other persons or associations having facts or holding opinions which they desired to communicate to the Commission.

The particular selection of individual witnesses of the first and second classes was in the first place left to Local Governments and Administrations acting upon the principles laid down by the Commission, that the evidence should be of as

representative a nature as possible, and that all classes interested should be adequately represented. But, as has already been explained, the action of the Local Governments and Administrations was in almost all cases supplemented by the Commission, who held themselves free to invite the evidence of persons or associations whose acquaintance with the subject was brought to their notice, or who seemed on any ground to be able to throw any light on the subject.

Witnesses of the third class were of course not selected, but were invited in the most public way, as has been already explained, to come forward and lay their views before the Commission, should they desire to do so.

The following table shows the number of witnesses in each province whose evidence was received by the Commission :—

Witnesses in British Provinces whose evidence was received by the Commission.

Province.	OFFICIAL.				NON-OFFICIAL.								
	Civil Officers.		Medical Officers.		Private Medical Practitioners.		Zamindars and Planters, etc.	Professional men.	Missionaries.	Associations.	Persons engaged in trade.	Others.	Total.
	Superior.	Subordinate.	Superior.	Subordinate.	Practising after European methods.	Practising after Native methods.							
Bengal	44	55	21	11	12	15	40	22	5	9	6	11	251
Assam	17	1	6	5	2	...	6	5	1	3	1	1	48
N.-W. P. and Oudh ...	44	29	21	25	6	52	45	6	1	1	17	17	264
Punjab	18	13	6	8	2	7	12	2	4	6	10	7	95
Central Provinces ...	16	18	6	3	...	1	21	4	3	...	12	...	84
Madras	42	36	17	20	1	6	13	9	17	2	15	15	193
Bombay	30	32	13	14	7	4	2	4	1	2	5	4	118
Sind	4	10	3	6	1	...	2	1	1	1	6	...	35
Berar	6	11	9	2	2	...	1	2	...	...	3	...	36
Ajmere-Merwara ...	1	1	1	1	1	2	...	...	...	...	...	...	7
Coorg	...	...	...	...	...	...	2	...	...	...	...	...	2
Baluchistan... ...	1	2	...	4	...	...	...	...	...	...	...	...	7
Burma	34	2	9	3	...	...	...	...	1		...	4	53
Total ...	257	210	112	102	34	87	144	55	34	24	75	59	1,193

This list comprises all the persons and associations in British provinces whose evidence came before the Commission, whether they were examined orally or not, and whether they were specially summoned or invited to give evidence or volunteered their evidence. A nominal list of the witnesses in each province

prefaces the volumes of evidence appended to the report. The evidence of all these witnesses is contained in the appendices.

The number of persons or associations who submitted written statements of their views in response to the Commission's invitation was extremely limited. In most cases their names appeared in the list of witnesses selected by Local Governments and Administrations, and they submitted detailed answers to the Commission's questions in which their views were fully set forth. In their cases the preliminary written statements, which were not intended to be treated as evidence, but were meant, as it were, to serve as an introduction to the Commission, have not been published, and only the written answers to the questions and the oral examination (if any) has been published. These will be found incorporated in the appendices containing the evidence. In the few cases in which answers to the questions were not furnished, the statements themselves have been treated as evidence, and have been published with the oral examination when such was made.

The evidence: Method of treatment of--

16. The Commission have given a liberal interpretation to the term "evidence," and have not required that the persons giving evidence should of necessity actually appear before them. To facilitate the collection of information, a series of 70 questions framed by the Commission was placed in the hands of the witnesses, or of the majority of them, and the written answers to these questions form the bulk of the evidence before the Commission. Also, as explained above, written statements, whether following the general line of the questions or not, which were from time to time submitted by persons or by associations who either did not care to answer the questions in detail or had no opportunity of doing so, have been accepted and treated as evidence.

In admitting to the record these answers to questions and written statements, the Commission have not held it necessary that the writers should come before them. The system followed was to summon, or request the attendance of, only those persons whom, after a perusal of their written papers, the Commission thought it desirable to examine orally. The papers of those whom it was not considered necessary to examine orally were at once admitted to the record. In summoning certain witnesses the Commission were generally influenced by the fact that their papers contained statements as to facts or expressed opinions which would be further elucidated if the witness had an opportunity of explaining them verbally before the Commission. It was not considered necessary to summon every witness whose evidence seemed to require to be tested or elucidated by oral examination : where several witnesses gave evidence of precisely the same character, it was deemed sufficient to select only some as representatives to be summoned. It was obviously impossible within reasonable time to cross-examine all witnesses. Other witnesses were summoned, not because their papers expressed any views which themselves required sifting, but because the Commission had reason to believe that these witnesses might, either from their position or from any other cause, be able to give further information than that contained in their papers. In orally examining the witnesses, the Commission did not take them through the whole range of their inquiries. The oral examination was almost entirely confined to those points in the written paper which required further elucidation, or to the subjects on which

the Commission thought the witness could give further information than that contained in his paper. In every case, however, the witness was permitted, if he chose to do so, to supplement his written paper by offering any further evidence relevant to the inquiry not already given by him. When a witness was orally examined, his evidence was taken down by a member of the Commission. It was not recorded in the form of question and answer, as this would have involved loss of time, but in the form of a narrative as nearly as might be in the words used by the witness. When the evidence was completed, it was read over to him, and (after any necessary correction) was admitted by him to be correct. This evidence, as thus accepted by the witness in each case, is published immediately beneath his written evidence, to which it is supplementary, and in connection with which it requires to be considered.

In almost every province some witnesses were examined orally who had not previously submitted written papers. These were either persons who, although they had not answered the questions, appeared to the Commission to be in a position to afford information, and were invited by the Commission when they arrived in the province to appear before them, or they were persons who volunteered to give evidence while the Commission were actually holding their sittings in the province.

In the case of officials who were summoned to appear, but who were unable to do so, and of non-official witnesses who were invited to appear, but failed to do so, the Commission have not excluded their papers from the record. Their written papers are published, but a note is added to the effect that they did not appear before the Commission for oral examination although summoned or invited to attend, as the case may be.

In the lists of witnesses prefacing the volumes of evidence appended to this report distinguishing marks are given to indicate those who were examined orally in addition to furnishing written papers, those who gave oral evidence only, and those who failed to attend although summoned or invited to appear.

CHAPTER II.

IMPORTANT POINTS CONNECTED WITH THE NATURAL HISTORY OF THE HEMP PLANT (CANNABIS SATIVA).

Limitation of discussion.

17. The subject with which the Commission have to deal is surrounded in many of its aspects with a mist of uncertainty and conjecture. It is the business of the Commission to remove these doubts as far as possible, and for this end it is incumbent on them to proceed on a basis of ascertained fact and established opinion as regards each branch of the subject. This principle must be applied to the natural history of the plant equally with the other matters on which they have to report.

Points for discussion.

18. In regard to the identification and idiosyncracies of the hemp plant, those points only will be noticed which have a direct bearing on the control of the narcotic in its various forms. These points appear to be—

(*a*) Whether the plant is indigenous to the British Indian possessions.

(*b*) Whether the narcotic-yielding plant is identical with the fibre-yielding plant.

(*c*) Whether, though systematically identical in the botanical sense, there exist in India distinct races yielding fibre and the different forms of the narcotic.

(*d*) Whether the fibre-yielding plant does as a matter of fact yield the narcotic in any form.

(*e*) Whether the narcotic-yielding plant does as a matter of fact yield fibre.

Points (*d*) and (*e*) are of course subsidiary to, and illustrative of, point (*c*).

Is the hemp plant indigenous to India?

19. Point (*a*) may be of importance in connection with the question of controlling the wild or spontaneous growth. In his "Report on the cultivation and use of ganja" which was issued when the Commission began their inquiries, Dr. Prain has discussed this question fully at pages 39 to 44. He is clearly of opinion that the hemp plant is not indigenous to India, but that "having reached India as a fibre-yielding species, the plant developed the narcotic property for which it is now chiefly celebrated there." Dr. Watt in his article on "Hemp or *Cannabis sativa*" is not quite so decided as the above authority in excluding the whole of India from the area of indigenous growth. He writes as follows: "It has been found wild to the south of the Caspian Sea, in Siberia, and in the desert of Kirghiz. It is also referred to as wild in Central and Southern Russia and to the south of the Caucasus. The plant has been known since the sixth century B.C. in China, and is possibly indigenous on the lower mountain tracts. Bossier mentions it as almost wild in Persia, and it appears to be quite wild on the Western Himalayas and Kashmir, and it is acclimatised on the plains of India generally. Indeed, the intimate relation of its various Asiatic names to the Sanskrit *bhánga* would seem to fix the ancestral home of the plant somewhere in Central Asia. On the

other hand, the Latin and Greek *Cannabis* is apparently derived from the Arabic *kinnab*. De Candolle says that 'the species has been found wild beyond a doubt to the south of the Caspian Sea, in Siberia, near the Irtysch in the deserts of the Kirghiz, beyond lake Baikal, and in Dahuria.' He is doubtful of its being a native of Southern and Central Russia, but suspects that its area may have extended into China, and is not sure about the plant being indigenous to Persia." The only part of India included by Dr. Watt and his authorities in the area of indigenous growth is therefore the Western Himalayas and Kashmir, and that only in doubtful language. Dr. King, Director, Botanic Survey of India, has no hesitation in pronouncing the so-called wild growth of India to be an escape from cultivation; and when it is remembered that Kashmir is on the main line of trade between Central Asia and Hindustan, the wild growth in that country and its neighbourhood may fairly be attributed to accidental importation by the hand of man from the recognized habitat, if not to escape from cultivation carried on at one time or other in the country itself. The evidence of botanists, therefore, may be taken to exclude India from the area of indigenous growth, and it will be seen that the direct inquiries of the Commission tend to confirm this view.

Is the fibre plant identical with the narcotic plant?

20. The specific identity of the fibre-yielding and narcotic-yielding plants, point (*b*), and the points which follow, are important as involving the possibility that the restriction of the production of the narcotic by limiting the cultivation may affect a product and an industry which are above suspicion. On the question of identity there is now no difference of scientific opinion. The researches of Dr. Watt are thus summarized: "*Cannabis indica* has been reduced to *Cannabis sativa*, the Indian plant being viewed as but an Asiatic condition of that species.....The reduction became the more necessary when it was fully understood that, according to climate and soil, the Indian plant varied in as marked a degree as it differed from the European.....With *Cannabis indica* differing in so marked a degree according to the climate, soil, and mode of cultivation, it was rightly concluded that its separation from the hemp plant of Europe could not be maintained"; and he compares the hemp plant to the potato, the tobacco, and the poppy, all of which "seem to have the power of growing with equal luxuriance under almost any climatic condition, changing or modifying some important function as if to adapt themselves to the altered circumstances." Dr. Prain, after personal examination of the plant, has recorded his opinion in the following words: "There are no botanical characters to separate the Indian plant from *Cannabis sativa*, and they do not differ as regards the structure of stem, leaves, flowers, or fruit.....Hemp, therefore, as a fibre-yielding plant in no way differs from hemp as a narcotic-producing one." These are the most recent scientific views, and coming from Indian botanists they carry special authority. It may be noted that Dr. W. C. Mackenzie, in an article on *Hashish* in the "Chemist and Druggist" of 9th July 1893, mentions certain differences between the seeds of *Cannabis indica* and those of common hemp. In using the name *Cannabis indica*, and pointing out this difference, is indicated a belief that the two plants are distinct varieties.

Description of the hemp plant.

21. At pages 38-39 of his report Dr. Prain has described the hemp plant. There are only two points on which the Commission from their own observations and inquiries feel

justified in correcting that description. Dr. Prain has omitted to notice the fact that the plant varies in the colour of its stem. The dark variety may be, and probably is, an accidental difference merely. But it will be found that the replies to the Commission's questions from Nepal and the memorandum from the Special Assistant Excise Commissioner in Mysore, Mr. McDonnell (para. III*a*), lay stress on the difference, and attribute to the darker variety stronger narcotic properties. The fact is also noticed by witnesses in different parts of India, and the Commission have themselves observed the variety of colour in the plants. And, secondly, in describing the male plant, Dr. Prain writes that there is no trace of even a rudimentary female flower. The Commission found at Khandwa hemp plants having the general appearance of males, but containing a few female flowers or seeds. These were quite distinct from the female plants with abnormal male flowers, which were also present in the Khandwa cultivation, and which are mentioned in Dr. Prain's description. The cultivators of Khandwa appeared also to recognize at least one variety of the pure male plant to which they gave a name of its own (*Sheoria*); but it has not been possible to detect any essential difference between it and the ordinary male plant, though specimens were forwarded to Dr. King. On this subject reference is invited to the description of the cultivation in the Central Provinces and Bombay.

22. The third point (*c*) is raised in Dr. Watt's letter (Vol. III Appendices).

Existence of races of the hemp plant yielding the different products.

The function of the Commission is to test by the information they have collected the views therein expressed regarding the probable existence of races capable of yielding as a speciality the different products—fibre, ganja, charas, and bhang. The only differences recognized in the plant by the people are between the *wild* and the *cultivated* plant, the *male* and the *female*, and the *varieties* of the male and female plant already referred to. The inherent potentiality of the seed to develop a plant closely resembling the parents must be admitted, but there is no evidence of racial speciality or differentiation of the decided sort suggested by the examples quoted by Dr. Watt.

23. The question is capable of being handled more definitely in the forms in which points (*d*) and (*e*) are stated. First, it has to be seen whether the plant cultivated for fibre yields the narcotic. The evidence on this point is positive and unmistakable. The female plant cultivated for fibre in Kumaon yields a very considerable amount of charas, and its flower heads, after being handled to collect the charas, can be, and sometimes are, smoked as ganja. The fact that it is the female plant which yields the drug seems to be very strong evidence that the functional process by which the narcotic is secreted in the fibre plant is the same as that by which ganja is produced in the plant cultivated for that product. There is also a considerable body of evidence that the wild plant not only yields the narcotic as held in its leaves, but is also capable of yielding, and does yield to treatment during growth and manipulation on maturity, the products charas and ganja.

Does the fibre plant yield narcotics?

24. There is no evidence that the hemp plant is cultivated for fibre anywhere except at a considerable elevation on the Himalayas; and as regards point (*e*), Sind appears to be the only place where the plant cultivated for the narcotic yields fibre. There the object of the cultivation is bhang, and the extraction of the fibre

Does the narcotic plant yield fibre?

is described as a process so difficult and laborious that very little of it is prepared. It may be noted that selected flower heads from the bhang cultivation of Sind are used as ganja (*ghundi*), though it is of inferior quality. The production of charas is not mentioned; but from the account of the cultivation for ganja in Bombay and Gwalior, it would appear that the production of that form of the drug (charas) depends on the quantity of resin secreted in the flower head and the economy of extracting it rather than on any quality inherent in the resin.

Dr. Watt's impression that *Cannabis* is cultivated for hemp in the Godavari districts seems to arise out of the confusion which has always existed in Madras reports on the subject of the hemp drugs, and from which the subject is not yet quite clear in that Presidency. Other fibre plants, such as *Crotalaria juncea* and *Hibiscus cannabinus*, whose products go under the name of hemp, have been confounded with the true hemp. It is now definitely stated in paragraph 7 of the letter from the Board of Revenue, Madras, to the Commission, No. 1839, dated 1st May 1894, on the authority of the Deputy Director, Agricultural Branch of the Board of Revenue, that "*Cannabis sativa* is never grown in this Presidency for fibre." Attention may in this connection be drawn to pages 3 to 5 of Dr. Royle's work on the "Fibrous Plants of India." He explains the effect of the Indian method of cultivating hemp and flax, involving free exposure of the individual plants to light, heat, and air, in causing the fibre to become woody and brittle instead of flexible and strong. He contrasts the European method of cultivation by thick sowing, which, with a temperate climate inducing slow growth, conduces to height and suppleness in the plant and its fibres. He admits that the Indian climate with its comparatively short seasons, great alternations of dryness and of moisture, and considerable extremes of temperature is not the best suited to the production of good flax and hemp. But he suggests that it might be possible by modifications of culture and the selection of suitable sites to grow both these plants within the limits of India so as to yield useful fibre. In the Himalayas only are to be found climate and mode of cultivation of the hemp plant resembling those of Europe.

CHAPTER III.

THE EXISTENCE, PREVALENCE, AND CHARACTER OF THE SPONTANEOUS GROWTH.

Bengal.

The wild growth not found over the whole province.

25. The Commissioner of Excise, Bengal, says in his memorandum that "the wild plant is found in nearly every district, and it grows abundantly in several places." The evidence enables the facts to be stated more definitely; and it will be seen that over a large part of the province the spontaneous growth is not so common or abundant that it can with any propriety be called wild.

The Patna Division north of the Ganges.

26. The Terai region of Bengal appears to resemble that of the North-Western Provinces in having a luxuriant growth of hemp. Beginning from the frontier of the North-Western Provinces, the evidence leaves no doubt that the spontaneous growth is extremely common and plentiful in that part of the Patna Division which lies north of the Ganges. The only witness who raises any doubt on this point is Mr. Williams, Collector of Darbhanga; and he describes the growth as much less common than in Assam, though plentiful on the borders of Nepal. The evidence generally, however, cannot justify any exception being made of the Darbhanga district.

The Bhagalpur Division.

27. Eastward from Patna lies the Bhagalpur Division, the region from which the bhang supply of Calcutta is brought. A special inquiry was made in this tract, North Bhagalpur and Purnea, by Mr. B. C. Basu, Assistant to the Director of Land Records and Agriculture, at the request of the Commission. Mr. Basu does not seem to have explored the waste lands of the Terai; his inquiries relate solely to the populous parts of the country. He says that the growth as a rule "is confined to land in the immediate vicinity of raiyats' holdings. Such land is usually called *dihisar* in Purnea and Bhagalpur, and is naturally the richest in the village." He says further on that these lands are used as standing ground for the cattle, and that "the washings from them flow over the alleys and ditches in the village; and as there is little or no cultivation at any time of the year, every bit of bare ground which is otherwise suited is covered with a luxuriant mass of wild hemp as soon as the cold weather has set in." The Commission would have been glad to learn more about the lands at a distance from houses. The Collectors of Purnea and Bhagalpur, while confirming Mr. Basu's account, report that the growth springs up notwithstanding that the lands may have been flooded for 3 or 4 months in the rains. It is not confined to waste lands, but comes up with the crops which are sown after the inundations have subsided. It is specially abundant within the influence of the floods of the Kosi river. It is clear then that the growth about homesteads and cultivation is extremely plentiful; and, looking to the whole evidence, the probability is that towards the Terai the wild growth is found in less close association with man, and in great quantity in suitable positions and soils. The Collector of Bhagalpur reports that in the Banka Sub-division, which lies on the south of the Ganges, the growth is not so plentiful, and is found principally on homestead lands.

The Rajshahi Division.

28. In the Rajshahi Division the Terai is still credited with heavy growth, and the northern parts of the Dinajpur and Rangpur districts are specially mentioned; but elsewhere evidence as to abundance has a more uncertain sound. Babu Abhilas Chandra Mukharji

(63), 2nd Inspector of Excise, says that the wild bhang grows luxuriantly all over the division. But this sweeping statement is not generally corroborated. Witnesses do not agree that the growth is abundant, though the fact that there is no licensed sale leaves no doubt that it exists in sufficient quantity to supply the people's wants. The district of Malda, which adjoins the Rajshahi district on the north-east, and is favourably situated as regards proximity to the great bhang-producing district of Purnea, does not appear from the evidence to have much spontaneous growth. It seems probable that the exceptionally favourable conditions associated with the Himalayas and Terai cease at the point where the Ganges swings round the Sonthal highlands, and that a straight line drawn from Sakri Ghât to a point on the southern fringe of the Garo Hills would mark the limit of a less abundant growth.

The Dacca and Chittagong Divisions.

29. But there is evidence that the growth is still common south of this line and east of the Ganges and Bhagirathi, more so under the Garo Hills and along the course of the Brahmaputra than elsewhere. It is hard to realize an area of wild growth quite so large as that mentioned by Babu Abhilas Chandra Mukharji, *viz.*, twenty square miles covered with long grass and hemp plants. Mr. Luttman-Johnson, talking of this very tract, Durgapur thana, says he saw the plant growing more or less thickly over twenty or thirty acres. Babu Abhilas Chandra Mukharji mentions many other places in Dacca and Mymensingh where the plant grows abundantly, and the Collector of Dacca corroborates his evidence regarding the south-west corner of that district. It is evident that in these districts the growth is very prevalent. Sarat Chandra Das (47) says that the growth is dense in places in the Chittagong Division, but he cannot say that it is abundant in any district.

The central part of Lower Bengal.

30. In the whole tract lying between the Brahmaputra and the Bhagirathi rivers, and bounded on the north by the imaginary line from the Ganges to the Garo Hills, the evidence as to the abundance of the growth is discrepant. The growth is probably most common on the banks of the Ganges and Brahmaputra.

South-Western Bengal bounded by the Ganges and Bhagirathi.

31. In the Patna and Bhagalpur Divisions south of the Ganges, and in the Burdwan, Orissa, and Chota Nagpur Divisions, the spontaneous growth is evidently very scanty. The plant is only found where its existence can be accounted for. In this respect the area resembles the southern fringe of the North-Western Provinces.

The Tributary States of Orissa.

32. The Tributary States of Chota Nagpur and Orissa are included in this description. Regarding the Garhjat, Mr. Worsley, Commissioner, reported in 1889: "I think it is very doubtful if ganja grows wild to any extent in the Tributary Mahals." And again Mr. Hopkins, Officiating Commissioner of Orissa, wrote in April of the same year: "The prevailing impression that ganja grows wild in the Tributary Mahals appears to me to be wrong." It is true that the Board of Revenue and the Government of Bengal declined to accept this opinion, but it is confirmed by the information gathered by the Commission. The Officiating Superintendent, Tributary Mahals, says indeed in his report that hemp grows in all parts of the Tributary States, but in his oral evidence he says he feels sure that the plant does not exist except in the enclosures of houses.

33. Regarding the Chota Nagpur States, the evidence of the Commissioner, Mr. Grimley, does not describe any but a very occasional and sparse growth in certain places, and even this is not corroborated by any local witness. There will be found on the contrary distinct statements that the wild plant does not exist. The reports from the Seraikela and Kharsawan States in the Chota Nagpur Agency do not mention the existence of the wild growth.

The Political States of Chota Nagpur.

34. The memorandum of the Kuch Behar State reports that wild hemp grows spontaneously in most parts of the State. The State lies within the belt of Sub-Himalayan growth.

Kuch Behar.

35. The report from Hill Tippera makes no mention of the wild growth. It states at the same time that there is no cultivation of the plant. This is incorrect, for there is evidence of some cultivation as well as smuggling from the State, and the wild hemp is frequently referred to in connection with it. The evidence of smuggling comes from Assam as well as Bengal. It is probable that the wild growth is not very extensive, and the information is not sufficient to warrant a decided opinion as to whether the plant sows itself or merely springs from chance seeds dropped near the homesteads.

Hill Tippera.

36. The hemp plant grows spontaneously and in considerable quantity in all parts of Assam, including the Brahmaputra and Surma Valleys and the Hill Tracts. One witness states that the wild plant used to grow in Assam before the ganja shops were established, and this would appear to be the fact, because the plant is cultivated on the Himalayan slopes overhanging the Brahmaputra Valley; it is found growing without cultivation in the hill ranges, and in the Naga Hills it is looked upon as a jungle product.

Assam.

The wild growth existed before ganja shops were established.

37. The Excise Commissioner, Mr. Driberg, has served in the province for thirty years. In his written answers he passes in order over all the hill ranges within and surrounding the province, and concludes by saying that they are all ganja-producing tracts. And referring more particularly to the plain country, he says: "The hemp plant grows with equal abundance in all the districts of the province, and in the semi-independent hills beyond the frontier. It is never seen in forests or other lands remote from villages, but always near villages or on abandoned village sites .... In the interior, remote from tea gardens and the settlements of foreigners, it is not found. So in regard to fields, it is found chiefly where there are foreigners." On the other hand, Dr. Macnamara (20) states that he has found the plant in Assamese villages far away from places where there are foreigners; but it would be difficult to get a place in Assam very far from the gardens. Mr. McCabe, Deputy Commissioner of Kamrup, being questioned about efforts that may have been made to control this spontaneous growth, says that no attempt has been made to exterminate the plant in the hills or in unoccupied lands, but any officer seeing a plant in occupied land is bound to cause it to be uprooted and to prosecute—presumably if there is any appearance of the plant having been cultivated,—and that there is now practically no growth in occupied lands. He is of course speaking of his own district. He says further that the quantity of growth

The wild growth in the valleys.

in waste lands is very small and has a tendency to decrease with the spread of occupation, and that active measures of extermination are not necessary. In face of other evidence, it is questionable if this can be accepted as a correct picture of the state of the spontaneous growth in the plains. It is certain that the weedy growth in yards and enclosed ground as well as in the waste places connected with habitations, present or past, is extremely common even in Kamrup. Mr. Gait, Director of Land Records and Agriculture, after appearing before the Commission, has sent notes with reference to Mr. McCabe's statements, in which he writes that he found the plant growing luxuriantly round the Kamalpur rest-house and within a mile of the one at Tambulpur, which were two of the four camps he stayed at since he entered the district; and he was beginning to think that, if properly looked for, it would be found in almost every village in Kamrup. From the fact that he always found it close to *basti* land, he was inclined to think that, if it was not actually planted, it was very actively tolerated. Dr. Mullane also says that "in the Kamrup district the hemp plant springs up spontaneously in almost every patch of cultivated ground." Without accepting Mr. Gait's opinion that the growth is fostered by the villagers, the Commission think from the body of the evidence that his description of the prevalence of the growth in Kamrup is not far from the truth, and that with but slight modification it will apply to every plain district of Assam. Regarding the Surma Valley, confirmation of this view is found in the evidence of Mr. Luttman-Johnson (Bengal, 6), an officer of long experience in Assam.

The wild growth in the hills.

38. Neither is there any reason to doubt that the plant grows without cultivation in the hill tracts within and bordering on the province. It is cultivated in the Bhutan Hills, and cannot but run wild there, as it does in other places which are thoroughly congenial. Mr. Driberg speaks of not only the Himalayas, but all the hill ranges within and bordering Assam, as ganja-producing tracts, and it is highly probable that the plant has to a greater or less extent run wild in all of them. Mr. Luttman-Johnson knows it grows wild in the Naga Hills and Bhutan, but thinks it must be from seed accidentally sown. He has seen it wild in the Khasi Hills and in the Mymensingh jungles, presumably at the foot of the Garo Hills. Mr. Godfrey (1) believes it grows wild in the Khasi Hills. Mr. McCabe (5) has seen it wild in the lower ranges of the Naga Hills. It may be doubted if the smuggling which is carried on from the hills in all parts of the province to the plains can be of the *wild* ganja as stated in the Excise Commissioner's memorandum, for the produce of the wild plant is of very inferior quality, and it can be got in the plains. The smuggled plant must have been to some extent cultivated, but its existence in the hills is a decided corroboration of the evidence that the wild plant is found there also.

The spontaneous growth must be regarded as wild.

39. It is difficult then to avoid the conclusion that Assam, including both the Brahmaputra and Surma Valleys, with the hill ranges which form part of the province, ought to be classed with the Himalayas and the Terai as a region in which the spontaneous growth has run wild.

Manipur.

40. There is only one Manipur witness, and he says nothing about the spontaneous growth. Mr. Driberg classes the State as a ganja-producing tract, whence the drug is surreptitiously brought down to the plains. No other witness gives direct evidence

about Manipur; but the prevalence of the spontaneous growth in the hills bordering the State on the Assam side, which is taken to be proved, justifies the inference that the growth must also be common in the State itself.

North-Western Provinces.

The official account of the wild growth.

41. The Government of the North-Western Provinces caused enquiry to be made about the growth of bhang in the year 1883. The Excise Commissioner then reported as follows: "The hemp plant grows wild, and is made into bhang in the fourteen districts marginally* noted. The hemp plant is cultivated, and the cultivated hemp is made into bhang in the three districts marginally† noted."

*1. Dera Dun.	8. Pilibhit.
2. Saharanpur.	9. Gorakhpur.
3. Muzaffarnagar.	10. Terai.
	11. Naini Tal (Kumaon).
4. Bijnor.	12. Kheri.
5. Budaon.	13. Bahraich.
6. Moradabad.	14. Gonda.
7. Bareilly.	

† Farakhabad, Garhwal, and Hardoi.

In the memorandum furnished to the Commission by the present Excise Commissioner, Mr. Stoker, the districts of Muzaffarnagar and Budaon are omitted from the list of districts in which the wild growth is found, and Basti and Garhwal take their place. It is stated, however, that the produce is considerable in Muzaffarnagar, Shahjahanpur, and Meerut. In connection with the cultivation in Hardoi and Fatehgarh, the Excise Commissioner remarks: "It is supplemented to some extent by self-grown plants produced about wells or houses and on small waste patches and head lands." Mr. Stoker then refers to the accidental growth in other parts of the province in these words: "Beyond these districts the hemp plant flourishes widely, though it is not produced in sufficient quantities to render it of any commercial importance. I would not venture to assert that it is always of purely indigenous growth, though its wide diffusion leads me to believe that this is the case. It may be seen growing about wells and temples, and in such places it is, no doubt, the produce of seeds scattered by travellers and fakirs who use hemp drugs. It is also found in and about houses and in gardens, where it is either introduced in the same way or deliberately sown. In all these cases I think the plants, if not the result of cultivation, are knowingly permitted to grow, and are subsequently used by the people who live in those places. The plant may also be seen springing up in a scattered way in waste places and low lands." It has been shown in the previous chapter that there is no *purely indigenous growth* of hemp, and that this description cannot be correctly applied either to the plant in the area of wild growth or to that in the tracts with which Mr. Stoker is dealing when he uses the expression. But the distinction must not be lost sight of between the area in which the plant is so prevalent as to deserve the character of *wild* and the reputation of propagating itself, and that in which it is more scantily distributed and springs from seed sown accidentally by man. The former area comprises the Himalayan regions and the districts lying immediately below the mountains. The following observations of Mr. Stoker include the latter area: "In some districts the amount produced by these forms of sporadic growth is considerable, and the constant source of complaint by the drug contractors who have the monopoly of the vend. These conditions obtain, broadly speaking, to a greater or less extent in all parts of the province lying north and east of the Jumna."

The Excise Commissioner then describes an area of very scanty spontaneous growth: "In Bundelkhand and most of Mirzapur—in fact, in all the country in and adjoining the hill system of Central India—the plant is much more rarely found. But that it can be grown, and with some perfection, in this tract also is shown by the occasional presence of plants and by the existence of

considerable cultivation in Gwalior and in some of the Bundelkhand Native States which interlace with British territory." Thus the belt of hilly country along the south of the province is still less favourable to the spontaneous growth than the plain north and east of the Jumna.

The evidence corroborates the official account.

42. The evidence tendered to the Commission confirms this description generally; but it may be noted that not a single witness speaks to spontaneous growth in the districts named in the margin, all of which, except Jhansi and Hamirpur, lie north and east of the Jumna. This absence of mention does not prove that the spontaneous growth does not exist, but it justifies the conclusion that in the central belt it is certainly not such as to deserve the character of *wild*, and that Mr. Stoker's description gives it as much of that character as it deserves. This central belt is approximately bounded on the north by a line drawn through Muzaffarnagar, Moradabad, Bareilly, Shahjahanpur, and Sitapur to Bahramghat on the Gogra, and thence following the course of that river. Throughout the country lying beyond this line, including the mountains, the spontaneous growth is abundant. It is bounded on the south and south-west by the Jumna river, beyond which the spontaneous growth is rare.

1. Bulandshahr.
2. Mathra.
3. Agra.
4. Mainpuri.
5. Etawa.
6. Etah.
7. Budaon.
8. Cawnpore.
9. Fatehpur.
10. Hamirpur.
11. Allahabad.
12. Jhansi.
13. Benares.
14. Azamgarh.
15. Unao.
16. Rai Bareli.

Garhwal Tehri.

43. The State of Garhwal Tehri comprises the Himalayan region west from British Garhwal, and there is no reason to suppose that its circumstances as regards the spontaneous growth of the hemp plant differ in any way from the latter district. The Diwan of Tehri gives 2,500 to 4,000 feet as the elevation at which the plant flourishes. Other evidence shows that it grows freely beyond these limits.

Rampur.

44. The Rampur State stretches south from below the Terai district. The Revenue Member of the Council of Agency writes that the spontaneous growth is found in the north and north-eastern part of the State. There is nothing to differentiate Rampur from the British districts lying east and west of it in respect to this growth.

Punjab.

Wild growth in the Himalayas and Terai.

45. The hemp plant grows spontaneously throughout the Himalayas, and in a broad belt along the foot of the mountains. The growth is so free and vigorous that it may without impropriety be called *wild*, and it does not appear to differ in extent and character from that of the similar region in the North-Western Provinces. Its prevalence seems to be most notorious in the districts of Hoshiarpur, Gurdaspur, and Jullundur, because the bhang contractors draw their supplies from these districts; but witnesses, many of them of high authority, such as the Commissioner of Rawalpindi, speak to its existence in greater or less profusion throughout the submontane districts from Peshawar to Umballa. Contradiction may occasionally be found regarding the density and abundance of the growth, but about its frequent occurrence in this stretch of country there can be no doubt. It has been seen that in other provinces it is the habit of the plant, when it finds itself established in a suitable home like the Terai, to grow very densely and in patches of considerable size, and the Commission are inclined to accept the evidence of those whose statements are in agreement with this knowledge.

The limits of the submontane belt of wild growth.

46. The growth decreases in frequency very rapidly as the Himalayas are left behind. It appears, however, from the evidence to maintain its hold in the Amritsar, Lahore, Karnal, and Shahpur districts further south than in others. As regards three of these districts, special reasons for this persistence may be suggested. Shahpur is watered by the Jhelum, which appears to carry an exceptionally heavy growth on the banks of its upper reaches. Amritsar is not only the great market for bhang as well as charas, but it is the head-quarters of the Sikh religion, and the former drug is largely consumed by the followers of that faith. It seems to be a regular drink or refreshment with the visitors to the Golden Temple. When members of the Commission visited the city, a dense growth of bhang flourished over a large area in the outlying parts of the public gardens and countless plants in the hedgerows surrounding the city. The seeds discarded from the large quantity of bhang that is daily consumed in the city sufficiently account for this growth, and it is probable that the ways leading to Amritsar from the country round are sown with hemp in the same way. The plant is probably propagated in the same manner, but to a less degree, around Lahore, the capital town of the province, and the head-quarters of the Administration. East of Umballa and Karnal the bhang-bearing belt appears to widen out, and its southern boundary would probably pass across the Karnal district.

The supposed wild hemp of the Suleiman Range.

47. The Excise Commissioner reports that "the supply of bhang is derived from the wild hemp plant which grows within the province in the submontane tracts under the Himalayas and the Suleiman Range." The evidence, it has been seen, corroborates the statement as regards the Himalayan tract. But it does not do so for the Suleiman region. The existence of the wild growth is not mentioned in Kohat or the Derajat Division. Witnesses (60) and (19) make statements which need explanation. The former says, speaking of the Dera Ghazi Khan district: "In the hill tracts of my *ilaka* the wild hemp grows here and there to a small extent, but no one consumes it. Sometimes budmashes, however, administer it from evil motives to another person without his knowledge." And again—"The wild hemp is known in this country by the name of '*kohi* bhang,' and cultivated hemp is called bhang only." The statement itself is open to doubt for two reasons: it is unlikely that the true hemp, though growing wild, should not be consumed, and the uses to which the *kohi* bhang is alleged to be put point to a much more potent drug. The explanation will be found in the answer of Mr. Dames (9), whose experience has been gained especially in the Derajat. He writes: "There is a plant known as *kohi* bhang found along the beds of torrents in the Suleiman Hills, the leaves of which are said to possess strongly intoxicating properties. This plant is certainly not a *Cannabis*, but I am unable to state what its genus is. It looks like a *solanaceous* plant. Its growth is scattered, and it is not found in great abundance anywhere." There can be no doubt that this is the plant to which witness (60) refers. It is in all probability the same as the *akoe* of Sind, which is proved to be *Hyoscyamus muticus* of the *solanaceous* order. The same plant is referred to by witness (36) in his oral evidence as *kuyi*, growing in a valley 50 miles west of Dera Ismail Khan. Witness (19) is not a very exact observer, and when questioned in detail about his knowledge of the wild plant travels away to the Umballa district. Witness (24), an Excise officer, mentions the *kooi* (*i. e.*, *kohi*), doubtless the same *Hyoscyamus*, as being imported from Kabul and Kandahar.

The same witness gives the name of another hemp plant as *badal*, saying that it is known to grow in the Waziri Hills about 50 miles to the west of Dera Ismail Khan. He describes its leaf as being as broad as that of the *madar*, which shews that this also is not the true hemp.

Spontaneous growth in the plain country.

48. Witness (41) mentions the wild plant as growing scantily on the banks of canals and in waste places in the Delhi district, and its occurrence in one tahsil of the Firozpur district is stated by another witness. These statements may very well be correct, but they do not imply a growth which can properly be called wild in the sense in which the word is now being used, but only a casual and accidental growth. One or two witnesses talk in a general way about spontaneous growth in all districts.

Area of wild growth defined.

49. It will be a safe conclusion to say that the wild growth is only to be found in the Himalayas and in a belt of country under those mountains which is very narrow at Peshawar, and gradually widens as it approaches the North-Western Provinces. Self-sown hemp plants may be found elsewhere, but there is no tendency for them to run wild outside the above tract.

Punjab States.

50. The wild growth occurs in the Himalayan States, and those of which any part lies within the Sub-Himalayan bhang-bearing belt. No State shows any peculiarity in the capacity for growing wild hemp. The Hill States are numerous, and need not be named. Kapurthala and Patiala are the only States in the plain country from which the spontaneous growth is reported, and it will doubtless be found in those parts of the States which fall within the Punjab tract of wild growth. Patiala has a considerable area of territory in the Himalayas, where the wild growth will be found to exist. The Bahawalpur witnesses say that occasional plants are found in graveyards—a not unlikely locality for such growth when there is sufficient rainfall—as there are generally *takias* in connection with them to which fakirs resort.

Central Provinces.

The wild growth does not exist.

51. There are only two witnesses in the Central Provinces who depose to having seen the hemp plant in spontaneous growth. One is Mr. Lowrie, Deputy Conservator of Forests, and he can only name one village. The other witness (52), Malguzar and Honorary Magistrate, saw it when ganja was allowed to be cultivated in his neighbourhood. Several witnesses make general statements, more or less of a hearsay character, that the plant springs up on heaps of village refuse from seed accidentally dropped. Mr. Drake-Brockman and many non-official and official witnesses, who ought to know, including Mr. Robertson, who has charge of the Nimar district, where ganja is cultivated and the escape from cultivation would be likely to occur, make more or less positive statements that the spontaneous growth is not to be found. The growth observed by Mr. Lowrie is the same kind of stray growth which is reported by other witnesses without having been actually seen. It was not in the jungles, and had probably sprung directly from seed thrown out of the houses. It is evident that in the Central Provinces the spontaneous growth does not occur, except very occasionally, as a weed in the neighbourhood of villages from seed accidentally dropped in suitable soil, and that there is no tendency for this spontaneous growth to reproduce itself.

Feudatory States.

52. There is no evidence that the plant grows spontaneously in the Feudatory States. The spontaneous growth, however, probably exists just as it does in the Province proper.

Madras.

No official knowledge of wild growth.

53. It seems clear that the spontaneous growth does not prevail in any part of the Madras Presidency to such an extent as to have led to the idea that the plant is wild. The Government memorandum states that nothing is known about the extent of the wild growth; and Mr. Benson, Deputy Director of Agriculture, has only seen some references to its existence in the northern district. The Commissioner of Salt, Abkari, and Separate Revenue, replying to the direct enquiry of the Commissioner of the Orissa Division on this subject in his letter No. 529-Mis., dated 11th May 1887, was unable to say whether the hemp plant grew wild. This is remarkable because the plant has always been cultivated as a regular field crop in various parts of the Presidency; the desultory cultivation in yards is common in certain localities; there are highlands in all parts of the Presidency which would apparently be suitable to its growth without cultivation; and the use of the drugs among the jungle people and the coolies of coffee and tea gardens is by no means unfrequent. The want of official knowledge of it is a fairly strong indication that the wild growth does not exist, or exists only in inconsiderable quantity.

Evidence regarding the wild growth.

54. It is only in the hill regions, such as the zamindaris of Ganjam and Vizagapatam, the Javadi Hills, the Shevaroys and other ranges in the Salem district, the Nilgiris and Wynaad, and the Palni Hills, that there is any reason to suspect spontaneous growth on at all an extensive scale. And the suspicion is not strong, for it has only been possible to elicit from one witness a description of the growth which agrees in any degree with what has been learnt about it in Northern India. This witness is Mr. William Robinson, Missionary, and his evidence must be discounted by the admission that "I am singularly deficient in the power of differentiating plants, but the smell of the hemp plant is well known to me." On the whole it is probable that the growth which this witness saw in the Shevaroy Hills was really hemp, but that he has frequently been deceived by other weeds, of which there are several, which bear a certain general resemblance to it. As to the abundance of the growth in the Shevaroys, he is to some extent corroborated by witness (189), who appears to be a practical man, and to speak from personal observation. But his observation is not recent and his statement is not in a convincing form. Other witnesses talk of the spontaneous growth as abundant in the Ganjam Hill Tracts and the South-East Wynaad, and even in the Ceded Districts; but there are equally good witnesses on the other side. The District Forest Officer of North Malabar, who appears to be of a careful and observant habit, says he has seen the spontaneous growth in the Travancore and Tinnevelly Ghâts and in the Wynaad, but it was always in the neighbourhood of cultivated plants. He says distinctly: "I have never seen the plant wild where there was no cultivated plant near." He describes the situation which appears to be suitable to the wild growth, and the growth itself as scattered. This is probably the best witness in Madras on this subject. Mr. Long (149) says that he has sometimes seen a few plants growing together which people told him had sprung up spontaneously; but

the most important of such patches of growth appeared to him to have been cultivated.

55. The general conclusion must be that the dense and widespread growth does not exist in the Madras Presidency, but that throughout the Presidency the chance and scattered growth on refuse heaps near villages or in other exceptionally favourable situations, such as old cattle-folds or coolie lines, may occasionally be found, and more commonly in the hill tracts than in the low country.

The chance growth of the Presidency is not wild.

56. There is information from Travancore that "in some hilly tracts where the seed was once sown by Kanikars, hillmen, a succession of plants appears to have been kept up without fresh plantation. This, however, is not strictly wild or spontaneous growth." The District Forest Officer of North Malabar has also spoken of the spontaneous growth in the Travancore Hills. This is all the available information on the present subject regarding this State. It seems certain that such spontaneous growth as does exist is not extensive; that it is intimately associated with cultivation, past or present; and that, though it may possibly succeed in occasionally reproducing itself, there is no marked tendency for the plant to run wild.

Travancore and Cochin.

57. There is no information about spontaneous growth in the minor Madras States. Their conditions are not in any way different from those of the Presidency generally, and the same extent of spontaneous growth may be expected to exist.

Sondur, Banganapalle, and Pudukottai.

58. The spontaneous growth is found occasionally in the districts where the plant is cultivated, especially Ahmednagar. It is said by one or two witnesses to occur also in the highlands of the Southern Maratha Country. But in no place does it appear to be either dense or frequent, being represented only by scattered plants on the refuse heaps about villages. Many intelligent witnesses, who have evidently bestowed great care on their inquiries, state positively that the spontaneous or wild growth does not exist, or are silent on the subject. Mr. Dodgson and Mr. Cumine mention its occurrence in the Dangs, but only as occasional plants. This is a country of forests and hills and scattered hamlets far removed from observation, and having a copious rainfall. The same description applies to the whole of the Western Ghâts, and the plant might be expected to run riot in these regions if it were inclined to do so. The Excise memorandum reports that the spontaneous growth does not exist.

Bombay.

There is no wild growth.

59. The plant does not grow spontaneously in Aden according to the report of the Political Resident.

Aden.

60. The plant does not grow freely from self-sown seed in any part of the Kathiawar Agency. A few plants may be found occasionally in fields or gardens or near irrigated crops. They seem to be generally more or less tended where they do exist. They are said to occur sometimes in grass preserves, but the evidence is of the weakest kind.

Kathiawar.

61. Cutch lies between Sind and Kathiawar. As there is no spontaneous growth in either of the latter provinces, it is unlikely that there should be any in Cutch. The Political Agent's report mentions none.

Cutch.

62. The report of the Chief Minister of Palanpur, the principal State in the Palanpur Superintendency, states that "wild hemp is found to a very insignificant extent in this State." There is clearly no extensive growth, that which is referred to being probably the few plants that spring from chance seed. This description may be held to apply to the whole Agency.

Palanpur.

63. No spontaneous growth is reported from the Mahi Kantha or Rewa Kantha Agency.

Mahi Kantha.
Rewa Kantha.

64. The Diwan of Kolhapur reports that "the wild plant is not grown in that State." In the smaller States of the Agency there is some cultivation, but no wild growth. There may be a rare spontaneous growth from chance seeds, but nothing more.

Kolhapur and Southern Maratha Country.

65. The only native territory in which the hemp plant is definitely stated to grow wild is the Dangs, and there only a few isolated plants. The language used by the Diwan of Cambay is ambiguous, but it at all events leaves no doubt that the spontaneous growth is quite unimportant if any exists; and the Superintendent of Police says that the wild plant is not found in the State.

Various States.

66. The spontaneous growth is not reported to occur in the valley of the Indus. Many witnesses speak of a plant called *ekoi* or *akoe* occurring in the hills on the western frontier of Sind as wild bhang. Specimens of the plant have been submitted to Dr. King of Calcutta and Mr. Woodrow of Poona, and pronounced by both to be *Hyoscyamus muticus*. It is said to be very much more potent than hemp, containing the alkaloid hyosyamine, an isomeride of atropine. Under the name of *kohi* bhang, "hill bhang," its intoxicating properties are well known to the natives, and it is stated to be smoked like ganja, and sometimes used in the same way as dhatura to facilitate robbery; and its use has occasionally been suspected in the Punjab and Baluchistan, where it is common (*Pharmacog. Indica*, Vol. II, page 631). The statements describing it as wild *hemp* are made in confident language, and often with some circumstance as to the manner in which it came to be accidentally sown in the hills. The words *ekoi* and *akoe* are probably short forms of *bhang-i-kohi*, or "bhang of the hills," which is the name used by some persons in the Punjab as well as in Sind. The Commissioner in Sind doubted the existence of the wild growth in the Baluchistan Hills as reported to him, and himself submitted specimens of *ekoi* to Mr. Woodrow with the result stated.

Sind.
The supposed wild hemp of the Baluch Hills.

67. It is doubtful if the spontaneous growth occurs anywhere in the province, because the rainfall of the Indus Valley is extremely light and the mountains on the western frontier are very arid. Even growth on the rubbish heaps near houses is unlikely on account of the want of water. It is probable that the almost total absence of rain counteracts the favourable conditions which might from the experience of Upper India be supposed to exist in the periodical floods and irrigation from the Indus.

No wild growth in the Indus Valley.

Khairpur.

68. The hemp plant does not appear to grow spontaneously in the Khairpur State.

Berar.

69. Under the regulations in force in Berar, the village officers are held responsible that all ganja of spontaneous growth is uprooted, and the cultivation of the plant is only allowed after license has been obtained. By these arrangements the spontaneous growth appears to be successfully kept under; for only one witness out of 38 can be found to say that it exists, and it may be doubted if he refers to the same plant.

Ajmere-Merwara.

70. There appears from the memorandum of the Commissioner, Ajmere-Merwara, to be no spontaneous growth of any importance —"Here and there a few plants grow spontaneously." The witnesses do not speak of any such growth. Plants that spring up in this way are up-rooted or made over to the contractor. There is evidently no dense growth of a wild character.

Coorg.

71. The Commissioner of Coorg is "doubtful whether wild hemp is actually found, but hemp springs up in the coffee gardens, near coolie lines, and near the huts of the wild tribes, and no one owns to its cultivation. A coolie in weeding the coffee will try to avoid pulling up the plant unless his master happens to be looking." The evidence of two witnesses describes a growth round about huts whose spontaneous character is doubtful, for it seems to be generally tended. A few chance plants may spring up of themselves in such places as are indicated above, but there is no wild growth of the dense character known in the north of India.

Quetta-Pishin.

72. No wild or spontaneous growth is reported from any part of Baluchistan. The witnesses do not know of its existence.

Burma.

Absence of wild growth remarkable.

73. Ganja was made contraband in Lower Burma in 1872-73. In that year large seizures of ganja illicitly brought from Upper Burma were made, and witness (19) states that Upper Burma was the chief source of supply in those days. This being the case, with the known tendency of the plant to run wild, the apparent suitability of Upper Burma to the growth of the plant, and the fact that the ganja-supply has by no means totally ceased notwithstanding the prohibition, it is remarkable that the evidence of the existence of the spontaneous growth should be so uncertain as to make it doubtful if it is to be found in any of the settled districts except as a very occasional weed.

Evidence regarding wild growth.

74. The Deputy Commissioner of Mergui alone mentions any extensive growth, and there are internal reasons for distrusting his statements. He no doubt made the acquaintance of the plant during his service in Kumaon, but he seems to have left that district over fifteen years ago, and his memory may not have served him. He talks unscientifically of the *indigenous* wild plant, which shows that he cannot claim to have made any study of the plant. The Burmese name he gives to the plant, "pi-san-bin," the literal translation of which is apparently "net-rope plant," is not used by any other witness. A rich alluvial loam, a climate hot and damp, and a low level are not, as far as the information given to the Commission teaches, conditions favourable to the spontaneous growth of hemp or to the development of its fibre. In his second paper he writes that the Siamese use the

cultivated variety of hemp, which suggests that he is talking of some plant in which the distinction between wild and cultivated forms is more marked than is the case with *Cannabis*. He was unable to procure specimens of the plant in June in reply to the request of the Commission reporting that the plant was not in growth at that season. Under these circumstances, this evidence must be regarded as falling far short of proof. The Commissioner of Pegu (2) had the plant pointed out to him growing outside three villages in Upper Burma among the rubbish heaps. He would not have known the plant if it had not been pointed out to him. The Commissioner of Akyab mentioned the scanty and scattered growth in his division of a plant which the Chittagonians call *boil ally*, and which he supposed to be a species of wild hemp. He has kindly sent specimens of the plant in answer to a request from the Commission, and they are found to belong to two species of *Sida*, *viz.*, *Sida spinosa*, *L.*, and *Sida carpinifolia*, *L.* These plants have no narcotic properties. The Commissioner of the Eastern Division, Upper Burma, who has been at some pains to make enquiries, and the Deputy Commissioner of Mandalay can give no information of the wild growth, though both have apparently come across cultivation of the plant. The Deputy Commissioner of Toungoo mentions the wild growth as existing, though not abundant, in Prome and Shwebo. The Inspector-General of Police in an expedition north-east of Bhamo found that his men were getting some kind of ganja from the Kachins, who gathered it in the jungles. A specimen of the ganja from these hills has been examined, and consisted merely of leaves and tops of the plant rolled into balls, and showing no signs of cultivation or preparation. A District Superintendent of Police states that in Upper Burma the plant is often seen growing near villages.

No wild growth in the settled districts, but probably exists in the northern mountain ranges

75. The evidence cannot be accepted as showing more than a casual growth in the neighbourhood of villages, which could easily be accounted for. It can neither be extensive in any particular case, nor can the cases be very numerous. Except the doubtful report from Mergui, there is no evidence of any tendency in the growth to reproduce itself and spread. These remarks apply to the settled districts only. The plant probably has run wild in the Kachin country and in the mountain ranges adjoining China, Assam, Manipur, Lushai, and Tippera.

Mysore.

76. The report of Mr. McDonnell, Special Assistant Excise Commissioner, shows that hemp sprung from chance seed is often found in all the eight districts of the Mysore State; but it does not appear to be abundant anywhere or more frequent in one district than another. The seed thrown away on dust heaps finds its way with the manure into fields and gardens. It is reported both from Mysore and Bangalore that when such plants are discovered they are uprooted, and that prosecutions are instituted if there is evidence of their having been cultivated. One informant states that abundant growth is to be found in three districts; but, with this exception, the official account is generally confirmed, and may be accepted as correct.

Rajputana.

Kerowli.	Kotah.
Alwar.	Jhallawar.
Dholpur.	Jeypore.
Jaisalmir.	Kishengarh.
Jodhpur.	Bikanir.
Bundi.	Tonk.
Serohi (only table).	Shahpura.

77. Memoranda have been received from the States of the Rajputana Agency named in the margin. The wild hemp is only mentioned as occurring in four of them, *viz.*, Jhallawar, Jeypore, Kishengarh, and Alwar, and that in very small quantity. The information leaves a decided impres-

sion that the wild and spontaneous growth of which mention is made is due to the germination of seed which has fallen by chance in favourable situations. There is no indication that the plant is inclined to run wild in this region.

Central India.

78. Mr. Gunion has collated the information furnished in the official memoranda from the States of the Central India Agency, and these have not been forwarded, with the exception of a memorandum of the Minister to His Highness the Maharaja Holkar. Mr. Gunion reports that "there appears to be no spontaneous growth of the hemp plant in Central India." The Minister says that "here and there a plant may be seen by road or river side or near the huts of fakirs, etc., due to the dropping of the hemp seed by consumers." There is no reason, except perhaps the somewhat greater prevalence of cultivation, why the accidental growth should be more common in the States of the Central India Agency than in those of Rajputana. It may safely be assumed that there is no material difference between the two Agencies in this respect.

Hyderabad.

79. The official memorandum by the Director of Agriculture and Commerce of the Hyderabad State reports no wild growth. The spontaneous growth, if it does exist, is not plentiful, and is only such as may be found all over India springing up directly in exceptionally favourable situations from seed accidentally sown.

Baroda.

80. The official report on the use of hemp drugs in the Baroda State by Anant Gangadhar Khoti states that "wild ganja is not to be found in this part of the country. It is neither cultivated nor does it grow spontaneously in any part of His Highness's Dominions;" and again "in none of the districts of this State does the hemp plant grow spontaneously." There may possibly be some confusion in the mind of the reporter as to the wild ganja plant being specifically distinct from that which is usually cultivated, for there is some small extent of cultivation in the State. But it may be safely inferred that the hemp plant has nowhere run wild, even if a chance plant may occasionally be found.

Kashmir.

81. Information regarding Kashmir is derived from memoranda by the Governors of Kashmir and Jammu and Muhammad Hayat Khan, Member of the Kashmir State Council. According to the last-named authority, the spontaneous growth in Jammu resembles in its character and the localities it affects the growth in the plains of the Punjab. He does not appear, however, to have any very exact idea of the latter growth; for he places many localities on the same footing, in some of which the growth is common, and in others scanty or even wanting. This much may be gathered, however, with tolerable certainty, that the growth in Jammu is not so abundant as in the more elevated tract of Kashmir. The tract of profuse growth in Kashmir mentioned by Muhammad Hayat Khan is Kashmir proper, extending from Baramula to Verinag and Shopayan. The country lying between Adhampur and Banhal in the Jammu province, as well as the jagirs of Bhaddarwah and Poonch, have also an abundant growth.

Two kinds of wild growth in Kashmir proper.

82. The memorandum of the Kashmir Governor mentions two kinds of wild growth which appear to have somewhat distinct characters. The growth called *talia* consists of the female plant, and is found in the Anantnag district and the Nagam tahsil of the

Srinagar district, growing on both banks of the Jhelum and of the Arveni and Karmu nallas. The bhang which grows on both banks of the Jhelum below the city of Srinagar is known as *kathiya* bhang, is weak in narcotic, and is used only for its fibre and for burning. The wild growth is very abundant. It supplies all the wants of the people, and there is consequently no cultivation.

In Jammu the growth is found in the Jammu, Bhimbar, Jasrota, and Udhampur districts. It is usually dense, and sometimes scattered. Here also there is no cultivation. The bhang of Bhimbar is said by some Punjab witnesses to be highly esteemed.

Nepal.

83. The Nepal Darbar's answers to the Commission's questions supply the following information. The hemp-plant grows wild all over the State, but it is more abundant in the Terai than in the hills, and in the hills to the west of Katmandu than to the east. Two varieties of the plant are noted—one with light-coloured stems, and the other with dark. Cultivation appears to be less common than in Kumaon. This, with the alleged decrease of the wild growth east of Katmandu, might lead to the belief that the hemp plant would become less prevalent in the Himalayan region further east in Darjeeling and Bhutan. But the impression is counteracted by the evidence from Darjeeling and Assam.

Summary.

The area of wild growth.

84. The result of this survey is to show that the wild growth is prevalent throughout the Himalayas from Kashmir to the extreme east of Assam. It probably disappears at a higher altitude than 10,000 feet. It extends down the southern slopes of the mountains, and into the Punjab and Gangetic plains to a limited distance. It is found in all the hill tracts of Assam and in the two great valleys of the province. It spreads along the mountain ranges on the frontiers of East Bengal, Assam, and Upper Burma from Independent Tippera, through Lushailand, Manipur, and the country of the Kachins, to the frontiers of China. The southern boundary of the area there indicated runs approximately from Peshawar through Gujranwala, Amritsar, Umballa, Karnal, Muzaffarnagar, Moradabad, Bareilly, Shahjahanpur, and Sitapur to the Gogra river at Bahramghat, and then follows the course of that river and the Ganges to Sahebganj on the north-east of the Sonthal country. From this point the line is more doubtful, but it should probably cross the drainage of the Ganges and Brahmaputra to Netrakona in the Mymensingh district, and then turn south to Comilla, thence east to the boundary of the Chin country, and thence take a northerly sweep to Mogoung in Upper Burma, and pass on to the Chinese frontier.

The manner in which the wild growth is propagated.

85. In the region thus demarcated the plant appears to propagate itself, but it is possible that the growth on the lower slopes of the Himalayas and in the Terai springs to a great extent from seed carried down from the mountains. There is a constant supply of this both in the wild growth of the higher Himalayas and the cultivation which is carried on there; and it is possible that the mountain ranges south and east of the Brahmaputra perform the same function for the growth in the country immediately below them. In the populous parts of the Sub-Himalayan tract and the valleys of Assam the wild growth is kept up in great measure by fresh importation of seed from the ganja and bhang which are consumed by the people. This is also true, though in a less degree, of the mountain and hill

ranges. It may very well be doubted if without these aids the plant would long survive in the low country under the vicissitudes of the Indian climate and seasons. The plant appears to be very hardy when it is once well established, but it is clear from the distribution of the wild growth in India that the conditions of soil and climate under which it can attain full growth are limited.

Conditions favourable to the wild growth.

86. It will be seen from the description of cultivation in Bengal that the seeds will only germinate properly if the nursery is kept thoroughly dry and the rainfall is not excessive. And throughout the growth the plant prefers a light, permeable, well drained soil. Similar evidence is furnished by the facts connected with cultivation in the Central Provinces and Bombay and the direct testimony of witnesses in answer to the latter part of the Commission's question 13. The soil need not be rich for the mere growth of the plant, for it will be found on a ballast heap as well as a dunghill. The essential conditions noted above are present in the Himalayas with the additional encouragement of a moderate temperature. If the rainfall should sometimes be tropical and excessive, it is carried off rapidly, and the seed or seedling has every chance of surviving it. The seed seems to germinate at the elevation of Simla in May and June, and it has five or six or seven months to grow and ripen its seed before the frosts come upon it. In the Himalayan submontane tract the seed germinates in November or December, *i.e.*, after the excessive moisture of the monsoon has sunk away from the surface soil, leaving it light and friable. The growth is favoured by the light cold weather rains, and does not meet with any very trying conditions unless it wanders very far from the shelter of the mountains. If it does, it will in all probability be burnt up by the fierce dry heat of the months from March to May or June. Protected by the mountain and forest air, it survives to ripen its seed, or perishes with the advent of the monsoon. The plant is not regular as to the time of germinating, and it seems to be later in the Assam Valley than in Hindustan. But in the same patch of growth plants will be found in all stages from the seedling to the flower, if not the seed bearer.

Conditions unsuitable to the wild growth prevailing in other parts of India.

87. It is evident that throughout India outside the demarcated region there must be conditions unfavourable to the spontaneous growth. They may be conditions of permanent unsuitability or recurring vicissitudes. Probably both operate to keep the growth in check. In a very general way may be indicated heavy soils, short seasons with severe alternations of dryness and moisture, extreme drought as in Baluchistan, Sind, and Rajputana, excessive and continuous rain as on the Western Ghâts, and seasons of abnormal drought or abnormal moisture. Where, as in Travancore, the plant is alleged to reproduce itself, an unusually wet season may operate as a very effectual check to extension of the growth, either eliminating it for the time, or thrusting it back into a few well-drained localities.

Areas where the spontaneous growth may be important outside the region of wild growth.

88. South of the demarcated boundary of wild growth will be seen on the map (Vol. III Appendices) two areas in lighter shading. One includes the central belt of spontaneous growth in the North-Western Provinces; the other the country between the Ganges and Bhagirathi on the one side and the Eastern Hill Tracts on the other stretching down to Calcutta. In these areas the spontaneous growth may under favourable conditions of site and season attain some importance.

CHAPTER IV.

EXTENT OF CULTIVATION, AND ITS TENDENCY TO INCREASE OR DECREASE.

Bengal.

Cultivation confined to a limited tract.

89. In Bengal the law (section 5 of Bengal Act VII of 1878) forbids the cultivation without a license from the Collector of plants from which intoxicating drugs are produced. The cultivation of the hemp plant is accordingly confined to a compact tract having a radius of about sixteen miles, and lying in the three districts of Dinajpur, Rajshahi, and Bogra. The reasons why this tract was selected are not authoritatively stated. Cultivation was formerly carried on in the Jessore district also, but that was suppressed in 1875. The present ganja tract was probably found to be most suitable to the cultivation of the drug, and it was obviously an advantage to the excise administration to have the production confined to one area where economical and efficient arrangements could be made for supervising it.

There is no unlicensed cultivation in the tract, and the tract is being reduced in area.

90. There is practically no clandestine cultivation within this tract. The Excise Commissioner writes that "owing to the area in which cultivation is permitted being extremely limited, and to the close supervision there, there is every reason to believe that unlicensed cultivation has been all but suppressed." The ganja tract appears to have a tendency to further concentration. The 1st Assistant Supervisor of ganja cultivation states that it is now included within a radius of about fourteen miles, having been reduced from a radius of twenty miles since 1866, and he gives the following explanation of the change: "The gradual reduction in the extent of the tract was due to the fact that by the removal of jungles in the villages not far off Naogaon more land became generally available for cultivation, and more ganja was produced. Purchasers having ganja near Naogaon do not naturally like to go to distant villages for their supplies." The remote villages in the north, south, and east of the tract have accordingly given up the cultivation.

The area cultivated.

91. The area cultivated in 1892-93 was 3,540 bighas, an area far larger than the crop has occupied for twenty years past. But in the year 1891-92 the cultivation was the least in the same period, and doubtless the short outturn had to be made up in the following season. The cultivation of the two years together is not remarkably high. The following explanation by the Excise Commissioner must be read with the statistics of cultivation: "It will be observed that, except in the past year, there has been no material increase in the area under ganja cultivation during the last twenty years. The column shows the quantity of land in which the crop finally matured, excluding such land as was cultivated, but in which the plants failed altogether; and therefore, although it would appear that cultivation was greatly curtailed during the years 1875-76, 1878-79, 1879-80, 1885-86, and 1891-92, this was not really the case in all the years excepting 1885-86, as the plants in large areas under cultivation were destroyed in these years by heavy floods, and such lands were not taken into account. The decrease in the area cultivated in 1885-86 was due to the smaller profits of the cultivators in the preceding two years. The high price which the drug had realised in 1891-92 owing to wholesale failure of the crop in the previous year caused by inundation

induced a large number of raiyats to take up lands for cultivation during the following year. Some raiyats are regular growers of ganja, and annually set apart a portion of their holdings for the purpose; others are induced to take to ganja cultivation by the high profits of one year to abandon it again when prices fall." The evidence furnishes no better account of the fluctuations than this. A bigha is about one-third of an acre in Bengal. The cultivation of 1892-93, therefore, amounted to 1,180 acres, and the average of the last five years from 1888-89 to 1892-93 is 824 acres.

Clandestine cultivation: not on a large scale.

92. Leaving the ganja tract, the evidence gives reason to suppose that there is a certain amount of rearing of scattered plants. This is, of course, carried on secretly, and in the places where the wild or spontaneous growth flourishes detection is more difficult. The Hon'ble Mr. Lyall thinks that the quantity of bhang that is now exported from the Bhagalpur Division shows that there must be cultivation to a considerable extent in that part of the country. He means that the bhang which is exported as wild must often be fostered, and perhaps to some extent sown and tended, by the occupants of the lands on which, or in the neighbourhood of which, it grows. Mr. Westmacott holds similar views because he has never found the wild plant in the jungle at a distance from habitations, but he does not indicate the localities to which his remarks apply. On the other hand, the Assistant to the Director of Land Records and Agriculture, who made special enquiries in the region referred to by Mr. Lyall, reports: "I could find no evidence of the hemp plant being actually cultivated in any part of Purnea and Bhagalpur. Everywhere it came up as a weed. In some places, however, where the plants did not grow in abundance, and would therefore seem to be an object of considerable value to bhang drinkers, I observed signs of its having been looked after with some degree of care." He then describes the signs of the plants having been attended to, and proceeds: "All this made me suspect that the people knew a great deal more about the bhang plant than they were willing to avow." This evidence is a partial corroboration of the high authorities named above, but it points rather to the surreptitious production of ganja in small quantity than to the cultivation on a large scale of the plant which the contractors carry away as bhang. And all the other evidence of the cultivation of the wild plant and of unlicensed cultivation generally refers more or less distinctly to the rearing of a few plants near houses, or in enclosures, or in the midst of crops, and not to operations of a more extensive kind.

The character of the clandestine cultivation.

93. This desultory cultivation, either from ganja seed or by rearing plants which have sprung up of themselves, occurs everywhere, though the evidence does not give the impression that it is common anywhere. It is stated in Mr. Gupta's memorandum that there were 86 arrests and 71 convictions on this account in the year 1892-93. Arrests were made in 25 districts, "but all the cases were for growing a few plants (very often a single plant) in the courtyards of houses." Babu Abhilas Chandra Mukharji says that "in almost all the districts in which cases of illicit cultivation have been detected, the plants had been grown from the seeds of the Rajshahi ganja." But Mr. Basu's report and such evidence as the first part of the following extract point rather to the nurture of self-sown plants. Babu Pran Kumar Das (43) states: "I prosecuted and also tried some cases of

nourishing and promoting the growth of hemp plants. There was ample evidence of nourishment, such as soil properly prepared, watering, manuring, and otherwise taking care of, but in no case was there any evidence of cultivation. I, however, suspected that it was cultivated in a few cases. In Gaya I found plants grown in a field and being taken care of just as other crops. Generally the ganja smokers grew it in places hidden from the public view. Inside house compounds a few only are grown. The largest (*sic*) I saw was a field in Gaya, may be 20 or 25."

The divisions where clandestine cultivation appears to be most common.

94. The Bhagalpur, Patna, Dacca, and Rajshahi Divisions appear to be those in which this illicit rearing is most prevalent, and the districts of Jessore, Cuttack, and Midnapur are also mentioned, but by only one witness in each case. It will be seen that this distribution agrees pretty closely with the prevalence of the wild growth. The quality of some of the evidence may be judged from that of a zamindar who wrote that "hemp (ganja) is said to be cultivated in certain parts of the Mymensingh district bordering the river Jamuna." The Board of Revenue ordered the Collector of Mymensingh to report on this allegation, with the result that the babu could not specify the villages in question, and that he was clearly, in the Collector's opinion, labouring under some misapprehension. The witness's statement indicated cultivation of a far more systematic kind than really existed, but it is unlikely that his information was entirely mistaken, and there is evidence in corroboration of the desultory kind of cultivation in Mymensingh. The evidence as a whole does not justify the belief that the wild plant is systematically cultivated or fostered to the extent suspected by Mr. Lyall even in the Bhagalpur and Monghyr districts, but it does show that the secret and desultory kind of cultivation is not uncommon in the divisions above named, and is rare in other parts of the province.

Kuch Behar.

95. Cultivation of the hemp plant is prohibited in the State of Kuch Behar, and it is probable that secret cultivation is only carried on to the same extent as in the surrounding British territory.

Tributary States of Orissa.

The extent and character of the cultivation.

96. It is notorious that a considerable amount of ganja and bhang is produced in the Garhjat. It is largely consumed in the British districts of Orissa, being either smuggled in or imported under pass. At one time the cultivation of the plant was prohibited within three miles of the British frontier, but that restriction has been removed, and it is now entirely uncontrolled. It is difficult to gauge the extent of the practice. In the collection of correspondence on this subject, the Commissioner is quoted as reporting that there were 1,000 consumers in the Angul State alone, and that they all grew ganja, selling only the surplus above their own wants. Babu Abhilas Chandra Mukharji holds the opinion that the outturn is very considerable, and capable of supplying the wants of all Orissa. One witness describes a spontaneous growth appearing in fertile places and never abundant; evidently the sort of growth which commonly springs up on rubbish heaps in the neighbourhood of habitations. He states that there is no cultivation, but in saying this he must be referring to regular field culture, for he states that people grow the plant for their own wants and sometimes sell it, the total production in his State being about twenty maunds a year. The District Officer of Angul (34) describes the same sort of cultivation, and says

that he has never seen more than twenty plants growing together. This account is confirmed by the Khas Tahsildar and Deputy Collector in Angul (73) and by Mr. Toynbee (4), who is the only official witness of superior rank who has made a tour of any duration in that country. It is pretty clear that there is no regular field cultivation in the Garhjat, and that the homestead or garden cultivation is quite uncontrolled and extremely common.

No decided evidence of increase in the cultivation.

97. Witnesses (62) and (52) think that the cultivation is increasing, the former because the sale of Rajshahi ganja in Orissa has fallen off, and the latter because the restrictions on cultivation in the Tributary States have been withdrawn. Witness (13) of the Central Provinces, who is Extra Assistant Commissioner and Diwan of the Sonpur State, reports that the cultivation in the Boad State where it borders on Sonpur has increased since 1889 "because (1) it has not been allowed in the latter State; (2) it can be had cheaper than that supplied from the Government godowns; (3) people say that ganja manufactured from plants cultivated in the Boad State, which are similar to those cultivated before in Sonpur, is liked by them better than the flat ganja, which they think is more injurious to their health." It may be that the prohibition of cultivation in the Central Provinces States has given an impulse to it in the Garhjat even beyond the limits indicated by this witness. But it cannot be said that there is evidence of a decisive character showing any important extension of cultivation of late years.

Political States of Chota Nagpur. Cultivation is under restriction.

98. All the detailed information that can be gathered of cultivation in the political States of Chota Nagpur comes through Mr. Grimley, Commissioner of the Division. One or two other witnesses who mention it state only the fact of its occurrence. In 1890 Mr. Grimley made special enquiries in the States on the subject, and the summary of replies from Sirguja, Udaipur, Gangpur, and Bonai seems to show that in all of them the cultivation is regularly practised, but everywhere under some sort of restriction. It would seem that the restrictions date back to 1883, and were imposed on account of representations from the authorities of the Central Provinces that considerable smuggling was being carried on from these States into that territory. It is proposed at present only to ascertain as far as possible the extent and character of such cultivation as exists.

The character and extent of the cultivation.

99. Regarding the character, it cannot be discovered that there is any systematic field cultivation. Mr. Grimley states that "there is no regular cultivation. In some of the Tributary States people smoking ganja grow the plant at their doors according to their requirements for smoking and drinking; but this is done only on a small scale." It appears from Mr. Grimley's report of 1890 that the produce is of inferior quality, and it may be concluded that the produce as well as the cultivation very much resemble those of the adjoining Garhjat. Regarding the extent of this cultivation, there is no apparent reason why it should be less than in the Garhjat, unless it be the absence of such an outlet as the Garhjat possesses in the bhang-consuming population of Puri, and the restrictions which the authorities of Chota Nagpur have succeeded in enforcing. Mr. Grimley thinks that the local production is now insignificant, and he mentions as proof of this that the

Raja of Gangpur some five or six months ago applied for permission to import ganja. On the other hand, reference may be made to a report of the Commissioner of Chota Nagpur in 1889: "The result of the inquiry was to show that a good deal of ganja was being grown, and was being sold in the Gangpur bazars to be brought into Sambalpur for sale," qualified by the following: "I have just passed through the Gangpur State, but have not visited the parts immediately bordering on Sambalpur. So far as the State generally is concerned, I have not been able to hear anything of a general cultivation of ganja, and I think it probable that the plant is grown chiefly on the borders of Sambalpur." No more definite estimate can be formed of the extent of the cultivation than that it is very considerably less than in the Garhjat States. The Chief of Jashpur, the State memoranda from Seraikela and Kharsawan, and other informants from Gangpur and Sirguja state that there is no cultivation at all, and it is said that in Sirguja the consumer has to import the drug. This evidence would indicate that in a great part of the country the practice of cultivation must be quite uncommon.

Hill Tippera.

100. Several witnesses speak to the cultivation of the plant in Hill Tippera, but they give little detail. It can be gathered, however, that the cultivation is of the ruder sort, the seed of the wild plant being often used. It is probably inferior to that of the Garhjat and the casual yard cultivation of the plain country. Otherwise it would have attracted the attention of Government, and the witnesses would have had more to say about it. Regarding the extent of cultivation, the evidence of a local officer, Babu Govind Chandra Basak (44), is probably the best. He says: "Very little ganja, say a few sérs, are grown in the Tippera Hills. The quantity is very small, for the hill authorities now import ganja under a pass from the Sudder (Tippera) golas." Still a small amount of smuggling into the plain country, both of Bengal and Assam, is said to occur. The State memorandum reports that "the cultivation of hemp is not carried on in the State."

Assam.

Cultivation prohibited and clandestine cultivation unimportant.

101. There is no authorized cultivation in the districts of Assam which are under settled administration, and prosecutions are regularly instituted against persons in whose ground the plant is found growing, if it bears any sign of having been nurtured and tended. The result is, in Mr. Godfrey's words: "This sort of cultivation is kept in check by the district officers, so there is no considerable area of it." This opinion is to be accepted rather than that of Mr. Gait, which has been quoted above, that the growth is very actively tolerated by the villagers. The plant sows itself and grows vigorously all over Assam, and there must, of course, be many instances of the desultory sort of cultivation, for the produce of the untended growth is very inferior, and the temptation to nurse a few plants is great. But there is no winking at the practice, and it cannot be regarded as important.

Cultivation in the hill ranges in and bordering the province.

102. In the Himalayan region on the northern frontier the regular cultivation probably resembles that which prevails throughout those parts of the same mountains about which there is more complete information, and consists of the more or less skilful cultivation of small patches in the immediate neighbourhood of homesteads; and it doubtless extends to the extreme north-east of the province, for there is evidence of it as far as the country of the Miris. It will probably be found also in the lofty ranges towards the Hukong valley and the north of Burma,

the country of the Khamptis and Singphos. In fact, there is information of the plant being cultivated with some care for fibre and the drugs in the adjoining Kachin Hills. But the evidence regarding the hill tracts within the province and on the southern frontiers points to cultivation of a very inferior sort, if indeed the plant is tended at all. It is said that the Nagas regard the plant as a jungle product, and that the ganja smuggled from the hills is hardly distinguishable from the produce of the wild hemp.

North-Western Provinces.

Extent of cultivation in the Himalayan Division.

103. In describing the wild growth of the North-Western Provinces, reference was made to cultivation for the production of bhang in the districts of Farakhabad and Hardoi. The true hemp plant is also very widely cultivated in the Himalayan Division principally for its fibre, but yielding charas, bhang, and seeds as secondary products. The Himalayan cultivation is irregular and scattered, but it has been estimated to amount to 250 acres in the Almora district, and, more accurately measured, at 580 acres in Garhwal. Compared with the spontaneous growth of the mountains themselves and of the region lying below them, this extent of growth is not very important, for the plant cultivated for fibre seems to be little superior in narcotic properties to the spontaneous growth.

Extent of regular cultivation in the plains.

	Acres.		Acres.
1879-80 ...	195	1886-87 ...	107
1880-81 ...	165	1887-88 ...	178
1881-82 ...	164	1888-89 ...	90
1882-83 ...	160	1889-90 ...	160
1883-84 ...	81	1890-91 ...	72
1884-85 ...	89	1891-92 ...	281
1885-86 ...	112	1892 93 ...	336

104. Turning to the plain country, the official returns give the marginally noted areas of cultivation in the district of Farakhabad, or Fatehgarh as it is called in Mr. Stoker's memorandum, for the last fourteen years. The Joint Magistrate and Excise Officer (No. 29) of the district, who presumably has access to the local records, quotes very different figures, showing a decrease of the area from 691 bighas in 1891-92 to 561 bighas in 1892-93. There is no apparent reason why the official return should not be accepted, and it shows a decided tendency for the cultivation to increase. The reason may probably be correctly traced in the sentence of Mr. Stoker's memorandum: "All this plant is converted into bhang, which is of a superior quality, technically known as *tatia* (from a village in Fatehgarh district), and commanding a much higher price than the wild bhang of the submontane tracts." Regarding the cultivation in the Hardoi district, the official return only gives one acre in the year 1891-92. This seems hardly consistent with paragraph 9 of Mr. Stoker's memorandum, which indicates a considerable export from Hardoi; but it is possible that the explanation may be found in the fact that the cultivation is not pure, but often mixed with other crops, and that it is therefore impossible to measure it. The practice of the less systematic sort of cultivation may be very prevalent in Hardoi notwithstanding that it is not recorded. Several witnesses, however, state positively that it is decreasing.

***Patsan* is not hemp (Cannabis).**

105. The evidence generally corroborates the official account, but many witnesses have been misled by the word *patsan* having been used to signify the hemp plant in the translation of the Commission's questions issued by the North-Western Provinces Government. *Patsan* is the local name for the *Hibiscus cannabinus* ("Field and Garden Crops of the North-Western Provinces and Oudh"—*Duthie* and *Fuller*). It has not, however, been difficult to detect the answers which have been vitiated by this mistake.

106. It does not appear that any regular field cultivation exists in the plain country beyond that which has been above described. Such cultivation as there is consists of the rearing of a few plants near houses, the tending of scattered plants sown accidentally, and perhaps the surreptitious sowing in the midst of crops calculated to afford concealment by their size and their general similarity to the hemp plant. Referring partly to this sort of cultivation in connection with the spontaneous growth, Mr. Stoker says that "in some districts the amount produced by these forms of sporadic growth is considerable, and is a constant source of complaint by the drug contractors;" and the evidence corroborates this view. He thinks, broadly speaking, that it prevails to a greater or less extent in all parts of the province lying north and east of the Jumna, and this comprises by far the greater part of the province. South of the Jumna, the Collector of Jhansi thinks that a good deal is grown in a quiet way for domestic use; and it is not unlikely, as there is no absolute prohibition, that all along the southern fringe of the province this sort of cultivation may be occasionally found.

Homestead cultivation in the plains.

107. The best informants regarding the cultivation of the Himalayan region are Mr. Gillan (21), Joint Magistrate of Moradabad, Murlidhar (248), Drug contractor of Moradabad, Pandit Ganga Dutt (56), a retired Deputy Collector, and Dharma Nand Joshi, Settlement Deputy Collector (49). The two first allege that the cultivation is spreading because of the enhanced value of charas; the third also alleges increase, but attributes it to the general usefulness of the plant. Dharma Nand Joshi takes the opposite view, and gives as reasons for decrease that the people have become more civilized, and are changing their habits as regards the use of hemp for clothing; that newly cleared forest land, which is peculiarly suited to the plant, is no longer available; and that other crops have been found more profitable. The last witness's description of the distribution of the cultivation is interesting. It is cultivated very extensively, but more for its fibre and seeds than for charas. In the warmer parts to the south the people wear cotton clothes and are not dependent on hemp. In the north also little hemp is sown, and that in but few villages, because the people keep goats and wear woollen clothes, using the hemp only for their *chabel* or shoes, and making but little charas, which they do not commonly sell, but give to fakirs visiting Badrinath and Kedarnath. In the parganas of Chandpur and Devalgarh more largely, and to a less degree in Barah Syun, Talla and Malla Salans, Choundkote, and Badhan, the plant is widely cultivated. Roughly speaking, it is grown in about one-third of the Garhwal district. In the portion last named every cultivator of the Khasia or Dom caste in every village which is situated at an altitude of between 4,000 and 7,000 feet sows a plot equivalent to two or eight perches.

The range of cultivation in Garhwal.

108. There is no prohibition in this province against the cultivation of hemp, but nevertheless it is clear that a contrary impression is abroad, as is the case in other provinces which are similarly situated in this respect. Mr. Bruce, of Ghazipur (28), thinks that as regards his district the belief "is traceable to the fact that in the adjoining districts of Bengal free cultivation is not allowed." The mere fact that the sale of the drugs is a Government monopoly might well give it wider circulation. Several of the witnesses evidently think that the culti-

Cultivation discouraged by the idea that it is illegal: Local production of ganja has decreased.

vation is illegal, and there is some evidence that cultivation was formerly carried on in some of the Oudh districts until it was suppressed by authority. Witness (135) says that in the time of the King of Oudh bhang used to be cultivated in gardens abundantly. Witness (251) speaks of *Mahadeva* ganja (in large bundles) being formerly made in Sitapur and Nawabganj. Witness (61) says that the district authorities having heard of the practice in Loohaisar, tahsil Fatehpur, district Barabanki, forbade it. Witness (247) mentions Sitapur and Lakhimpur and Kheri as districts where ganja was formerly cultivated, and that it has now disappeared in the Province of Oudh. According to this witness, it was fostered by the Nepalese in the parts of the province which were formerly under their domination; and it would seem that the *Mahadeva* ganja got its name from a place in Barabanki where the cultivation was formerly carried on. This origin for the name is confirmed by the evidence of other witnesses. Mr. Stoker is therefore probably mistaken in supposing that this sort of ganja was imported from Nepal. The evidence leaves the impression that a system of practical restriction is going on tending to confine the cultivation to the districts of Farakhabad and Hardoi. It also seems certain that the local production of ganja has of late years very considerably decreased.

Rampur.

109. The only Rampur witness states that there is no cultivation of the hemp plant in Rohilkhand, but there can be little doubt that the sporadic cultivation prevails in Rohilkhand and Rampur to the same extent as in the neighbouring British districts.

Garhwal and Tehri.

110. The description which has been given of the general prevalence of Himalayan cultivation must be accepted for native Garhwal and Tehri. There is no memorandum from the State and no evidence relating exclusively to it.

Punjab. Himalayan cultivation.

111. The Himalayan cultivation of the Punjab does not differ from that of the North-Western Provinces, but from the fact that there is none in Kashmir, it would appear to decrease in frequency westward. The plant is grown principally for fibre and in small scattered patches, so that its area cannot be estimated. Mr. Anderson (10), however, ascertained in 1880 that the area in Kulu and Plach was then about 200 acres. Witness (71) states that in British Lahoul every zamindar cultivates a small patch for the sole purpose of obtaining its fibre, and that charas, which he calls bhang, is imported.

Bhang cultivation in the south-west part of the province.

112. In the south-west angle of the province there is a small amount of systematic cultivation for the production of bhang. The Excise Commissioner reports that this does not exceed 100 acres. The evidence gives figures for some districts. Thus witness (68) estimates the produce of the Muzaffargarh district at 100 maunds, which would require some 10 or 12 acres of crop. Witness (24) states that the area in the Jhang district in 1893 was only 20 kanals. In Dera Ghazi Khan the area seems to be about 30 acres. Five acres are said to be cultivated in Shahpur. Several witnesses talk in general terms of cultivation for bhang being practised. Some describe the cultivation as consisting of the rearing of a few plants in yards and gardens by fakirs and other consumers. Witness (39)

states that cultivation is carried on in every district more or less, "but more so in Hoshiarpur, Derajat, and other frontier districts." All this cultivation is stated to be for the production of bhang. Ganja is not smoked in the Punjab. The cultivation of the more systematic kind is probably not understated at 100 acres. The desultory cultivation of a few plants seems to be a wide-spread practice; but the total amount of bhang produced by it cannot be important—must, in fact, be trifling compared with what the wild growth yields.

Cultivation not increasing.

113. The evidence and other papers do not show that the cultivation is other than stationary. There is no legal prohibition to the growth of hemp, but it is probable that it is discouraged and restricted by the fact that the sale of the produce is under regulation.

Punjab States.

114. There does not appear to be any artificial restriction in any Punjab State on the cultivation of hemp, not even in Nabha, where the use of ganja and charas is said to be prohibited. Bahawalpur is, however, the only State of those furnishing information in which cultivation for the narcotic is admitted to exist. It is not confined to any special locality. Farmers grow small patches with other crops, generally near wells. It yields bhang, only in sufficient quantity for local consumption, and seeds which are used for food as well as for fresh sowing. It is stationary in extent. Chamba reports that the drugs are not produced, but it is probable that cultivation for fibre and seeds exists in this State as in the rest of the Himalayan region. There is no reason to suppose that the cultivation, which is habitual at certain elevations in the Himalayas, *i.e.*, from about 4,000 to 8,000 feet, is not practised by the Native States. Mr. Coldstream refers to cultivation in Bashahr and near Kasauli, and says that in the former tract the plant produces resin. But it certainly appears from Mr. Anderson's report regarding Kulu, the evidence of witness (71), and the fact that the evidence about the preparation of charas is wanting in certainty and definiteness, that charas is not looked upon as a regular bye-produce of hemp cultivation to the same extent that it is in Garhwal further east. It would appear that towards Kashmir the wild plant becomes more extensively used for the preparation of drugs.

Central Provinces.

The progress of restriction of cultivation.

115. Going back to the year 1872-73, the Excise Commissioner writes that "in almost every district a few hemp plants were to be found in the gardens of cultivators, and it was only in Raipur and Bilaspur that a license-fee was imposed on cultivation." This general and unsystematic cultivation was an impediment to excise management and to the control which the Government of India enjoined on the Local Governments as the result of the inquiries made in 1873. By special inquiries instituted in 1873-74, it was ascertained "that in every district, except perhaps Hoshungabad, Narsinghpur, Mandla, Chhindwara, and Bilaspur, the amount privately grown for home consumption was insignificant, while in Sambalpur it was *nil*, home-growing having been prohibited by executive order of the Deputy Commissioner." From this date the general restriction of cultivation was kept steadily in view, and before long a system of licensing cultivation was introduced. Penalties for unlicensed cultivation were ordained and enforced in many cases. The districts where regular cultivation has

been chiefly carried on during the last twenty years are Nagpur and Nimar, but up to the year 1878-79 licenses for cultivation of small areas were granted in one year or other in twelve other districts, of which Wardha and Chhindwara were the most important. From this year cultivation was confined to Nagpur and Nimar. It gradually fell off in the former of these districts, and since 1890-91 it has been restricted by law to the Nimar district. The Deputy Commissioner of Nimar now reports that "ganja is grown in sixty or seventy villages in Nimar. The cultivation is confined to the western half of the Khandwa tahsil." And he gives the following figures of area for the last three years:—

	Acres.
1890-91	477
1891-92	963
1892-93	984

The figures of cultivation in Excise memorandum to be corrected by figures given by Deputy Commissioner, Nimar.

116. Mr. Robertson's figures for the last twenty years frequently differ from those of the Excise Commissioner's tables, and he explains that they "represent the area actually cultivated, not the area for which the licenses were granted. The latter is almost always in excess, as the cultivator generally asks for a license for more land than he means to plant in order to ensure against his being proceeded against for excess cultivation." This explanation, applied to Nagpur as well as Nimar, may perhaps account in some degree for the abnormally high figures of cultivation shown by the Excise Commissioner in 1877-78, 1884-85, and 1885-86; but it will be seen that in 1884-85 the quantity of ganja deposited in the central stores was unprecedentedly high also (paragraph 32, Excise Memorandum). If the excess Nimar cultivation be deducted and the year 1878-79, in which the figures agree, be included, it will be found that the total area of cultivation has gone above 1,000 acres in only four years, *viz.*—

	Acres.
1877-78	1,605
1878-79	1,285
1884-85	1,166
1885-86	1,659

The normal acreage of cultivation.

117. Between these years of high figures will be found, after making similar deduction in 1882-83, a period of great depression, *viz.*, from 1879-80 to 1882-83. The Excise memorandum shows that the whole of this period from 1877-78 to 1885-86 was marked by drastic changes in the excise arrangements, and it may be noted that it was coincident with extensive cultivation in the neighbouring Bombay district of Khandesh. Matters then settled down, and the normal demand under present arrangements seems to be met by cultivation closely approaching 950 acres. For 1891-92 the Deputy Commissioner's figures of 963 acres is taken in preference to the Excise Commissioner's 653 acres. Abnormally low figures are found in 1887-88 and 1890-91, which are probably to be accounted for by a surfeit of stock from previous years.

Illicit cultivation is rare.

118. The desultory and illicit cultivation, if carried on at all, is confined to gardens and backyards, and is never to be found in open fields. The authorities believe that it has been practically suppressed, and the Commission have heard so little of its existence

that they must accept that view. The Inspector-General of Police and Prisons is the only witness who believes that it is common. Mr. Naylor, District Superintendent of Police, states that "about six or eight cases are annually reported of the ganja or hemp plant being grown in *baris*;" but he adds: "I think the illicit cultivation has now almost ceased." Some few witnesses state that hemp is sometimes raised from the seed of the wild plant, and in saying this they must have the irregular cultivation in view; but the same witnesses do not clearly depose to the existence of such cultivation in the Central Provinces.

Feudatory States.

119. The Feudatory States, most of which lie in the extreme east of the province, have agreed not to allow cultivation and to import their ganja from the Government godowns at Khandwa. It is possible that the yard cultivation which was formerly common has not been entirely suppressed in these States, for it is unlikely that the supervision in such remote and wild tracts can be very strict. But the responsible officers of some of them—Khairagarh, Sonpur, and Bastar—give assurance that the cultivation has been stopped.

Madras.

Distribution of cultivation as given by the Deputy Director, Land Records and Agriculture.

120. The Deputy Director, Agricultural Branch in the Department of Land Records and Agriculture, has, at the instance of the Commission, made personal inquiries into the cultivation and manufacture of ganja in the Presidency, and recorded the results in bulletin No. 29. The opening paragraph of the bulletin gives a general view of the distribution of the true hemp plant (*Cannabis sativa*) throughout the province: "Though grown here and there in most parts of the Presidency in backyards, it is found as a regularly cultivated field crop in only two localities, *viz.*, in the Malayali villages on the Javadi Hills in North Arcot, and in one or two villages in the Bapatla taluk of Kistna district. It is also raised to a certain extent in the hilly parts of Vizagapatam and Ganjam, but there seldom more than a few plants are grown by each person." The localities where field cultivation is carried on are no doubt correctly indicated in this passage, and they are the principal ones; but the statistics which have been furnished to the Commission by the Government of Madras as well as the evidence lead to the belief that regular cultivation to a greater or less extent is to be found in other districts. And there is reason to think also that the bulletin does not give a correct idea of the general prevalence of the practice of home cultivation in yards and gardens. This may have been outside the scope of Mr. Benson's inquiry. At the close of the pamphlet Mr. Benson writes that "in both localities it is stated that of late years the area planted with hemp has been reduced, the price offered for ganja having fallen with the restriction of the demand owing to the introduction of the system of licensing retail vendors. A few years ago the crop was also grown to some extent in the Pulivendla taluk, Cuddapah district, but its growth there has now been abandoned."

Extent of regular cultivation: Figures of doubtful accuracy.

121. The official statistics of cultivation are admittedly inexact, and the imperfection appears to be due to two causes. The Acting Secretary to the Board of Revenue in the Department of Separate Revenue reports in his letter No. 1839-Mis., dated 1st May 1894, that "accurate figures are nowhere available, as no accounts are maintained respecting the cultivation of the plant." And further on in the same report he refers to the second cause of error in the following words: "It is very

probable that the Collector here, as elsewhere, has confounded the area of the narcotic hemp plant (*Cannabis sativa*) with the fibre hemp (*Crotalaria juncea*), which is a totally distinct plant. The Board has been informed by Mr. Benson, Deputy Director, Agricultural Branch of the Board of Revenue, that the *Cannabis sativa* is never grown in this Presidency for fibre, and that the hemp plant grown for fibre must be the *Crotalaria juncea*." Under these circumstances it is useless to make a detailed examination of the figures of cultivation for past years, and there is little chance of its being possible to arrive at any definite conclusion as to whether the area of regular cultivation tends to increase or decrease. The area under regular cultivation in 1893-94 appears from the statistical table and the correspondence arising out of it to be as follows:—

	Acres.	Cents.
Ganjam	0	62
Godavari	1	12
Kistna	201	7
Kurnool	5	0
North Arcot	77	0
Coimbatore	50	0
Nilgiris	2	0
Nellore	1	44
South Canara	7	0
Total ...	345	25

But in Mr. Horne's memorandum South Arcot and Cuddapah are credited with 5 and 30 acres respectively, which would raise the total to 380 acres. It may, however, be doubted in view of Mr. Benson's statement that cultivation in Cuddapah has been abandoned, and of the fact that fibre is mentioned in connection with the cultivation in South Arcot, whether this cultivation really exists. The North Arcot area was 200 acres for 1892-93, and the fall in 1893-94 is said to be due to the restriction of the trade in the drugs and to the absence of seasonable rains in the hills. The total area of 350 acres is probably under the mark.

Home cultivation common, but probably decreasing.

122. The evidence leaves no doubt that the home cultivation of a few plants is carried on in nearly every district in the Presidency, and it is difficult to believe in view of its general prevalence that it is altogether non-existent in Madras, Chingleput, and Tanjore notwithstanding the direct negative of the Collectors of the last two districts. On the other hand, there is reason to think that the regulation of the traffic in the drugs, which was introduced in 1889, and has been applied with greater care and stringency in recent years, has created the impression in the minds of the people that the cultivation is illegal. The occasional action of preventive officers in warning growers of casual plants, and perhaps in causing the plants to be uprooted in some instances, may have enforced this idea. The result on the balance of evidence seems to have been to reduce this kind of cultivation, and it is quite possible that many of the witnesses who depose to the existence of it are speaking from memory and experience rather than from recent observation. The Collector of Cuddapah, a district where there is reason to suspect the existence of a small amount of field cultivation as well as much home growth, argues that the excise

restrictions may have reduced the cultivation which serves the markets, but must encourage the home growth, which is not illegal, for private consumption. Several other witnesses infer that there must be increase of cultivation from the spread of the taste for the drugs. One of the most definite statements of the last class is that of the District Forest Officer, North Malabar, that, "owing to the greater demand for ganja from the coast, cultivation as described above is slightly increasing year by year." Another witness states that in Ganjam the cultivation is increasing in the Agency tracts while it is declining in the plains. Reference may be made to another specimen of the arguments to shew increase. After quoting the returns of cultivation in the Bapatla taluk, which show steady decrease, as the only ones available, the Acting Sub-Collector at Guntoor writes: "As far as Baposia taluk is concerned, the figures given above seem to indicate that the area under hemp cultivation is gradually decreasing. But I am inclined to think that these figures are not reliable." And, after alluding to the introduction of excise arrangements and increase of revenue, he proceeds: "This shows that there is a possibility of large future developments in the trade in hemp drugs, and the hypothesis that the cultivated area is gradually decreasing must necessarily be wrong." Being ignorant of the method of keeping agricultural statistics in the Madras Presidency, the Commission are unable to judge how far the Sub-Collector is justified in mistrusting the figures he quotes. That some ground exists is shown by the admission of the Secretary to the Board of Revenue quoted above. But, taking this for granted, the arguments cannot be accepted, for there are other sources of ganja supply besides the Kistna district, and the expansion of the revenue does not necessarily imply an increase of production or even of consumption.

The extent of home cultivation.

123. There is not after all any great body of evidence to show increase of cultivation, and the increase indicated is not very decided, except perhaps in the case of Angappa Gonuden (189), who says: "Hitherto cultivation of the ganja plant was very rare. But it has now considerably increased, since more people resort to its use now than before." This witness is worth quoting, because his answers are generally sensible, and he appears to be in the habit of cultivating the plant himself. But it is advisable to guard against an apparent tendency to exaggeration. His description of the extent of cultivation in Salem may be quoted here with the above reservation as probably typical of several localities in the Presidency: "There is little of the ganja plant cultivation in my district of Salem. They are all for the production of ganja alone. One-fourth of the houses in Salem have on an average half a dozen plants in each backyard. The same number of plants can be found in at least 2 per cent. of the fields in the villages of Salem, Ather, and Namakul taluks." In most districts the extent of backyard cultivation falls short of this description. In Cuddapah and Coimbatore the state of things would seem to resemble Salem, with the addition that there are probably some small patches of field cultivation grown for profit. In the hill tracts of Ganjam, Vizagapatam, and Godavari, and to a very much less degree in the Wynaad and the Nilgiris, the home cultivation seems to be carried on for the market, the produce being used for barter or sale to licensed dealers. There is no formal restriction on cultivation, and the cultivators are allowed to sell the produce to the licensed

dealers. The whole of the homestead cultivation must, therefore, be regarded as entering into the licensed consumption. Looking to the extent of this cultivation throughout the Presidency, and especially in the hill tracts of the north and south, it will not be extravagant to say that the total area in which the hemp plant is cultivated is perhaps double that of the regular field cultivation.

Madras States.

Sondur, Banganapalle, Pudukottai, Travancore, and Cochin.

124. The only cultivation reported is two acres in Banganapalle. But the plant is found uncultivated in Travancore, and there is reason to believe that in this part of India the spontaneous growth is associated very intimately with cultivation. It may therefore be inferred, in spite of the fact that the drugs are imported, that there is some home cultivation in that State. And from the survey of the whole Presidency, which showed a general prevalence of home cultivation, it may be presumed that it is to be found in all the States, more commonly in Travancore than elsewhere, owing to the country being more favourable to the growth on account of a great part of it being hill land. It appears also that in Travancore the Kanekars, a hill tribe, are allowed to grow the drug for their own consumption.

Bombay.

Extent of regular cultivation.

125. The districts in which the regular cultivation of hemp is now principally carried on are Ahmednagar and Satara, and their acreage for the last eight years is as follows:—

	Ahmednagar. Acres.	Satara. Acres.
1885-86	1,030	411
1886-87	789	558
1887-88	637	173
1888-89	268	170
1889-90	830	368
1890-91	605	471
1891-92	676	317
1892-93	382	299

In the following districts also there is a small extent of regular cultivation:—

	Five years' average. Acres.
Khandesh	30
Poona	12
Nasik	16
Sholapur	46
Bijapur	4
Broach	¼
Surat	11

These figures are taken from the table submitted by witness 49, Superintendent, Office of Survey Commissioner and Director of Land Records and Agriculture, because it is more complete than the statistics furnished by the Commissioner of Abkari, and probably more correct. In the year 1885-86 Khandesh grew as much as 311 acres, but the area has now fallen to 9 and 10 acres in the last two years. The district adjoins the Central Provinces district of Nimar,

and its hemp cultivation has probably been checked by the excise system of the latter province, which underwent important changes about the year mentioned above.

126. The total cultivation of the Presidency, excluding Sind, for the last eight years is as follows :—

Cultivation decreasing.

	Acres.		Acres.
1885-86 ...	1,844	1889-90 ...	1,341
1886-87 ..	1,488	1890-91 ...	1,201
1887-88 ...	904	1891-92 ...	1,093
1888-89 ...	533	1892-93 ...	812

One or two witnesses hint rather than indicate specifically the existence of cultivation in the Ahmedabad and Kaira districts of the Guzerat Division and in Thana in the Konkan. But there is certainly no regular field cultivation in these districts. Except about twelve acres in Surat and Broach for the production of what is called bhang, the whole cultivation is practically confined to the Deccan or Central Division. It has been suggested that the excise system of the Central Provinces is to account for the fall of the cultivation in Khandesh from the high acreage of 1885-86, and it may have affected districts at a greater distance from the frontier. But it can hardly be accepted as the explanation of the extraordinarily low figure of 1888-89. The reduction in this year was shared by the four contiguous districts in the southern part of the Central Division and not by the districts of Nasik and Khandesh in the northern part, and was probably due to an unfavourable season. There is no official explanation of it. In the succeeding year cultivation recovered, but has since shown a steady decrease. Witnesses state that the irksome conditions imposed by the excise system render the cultivation unpopular, though it is not burdened with any direct tax or license. This may well be the cause of the decrease.

127. Regarding homestead cultivation, the Collector of Thana writes: "The plant is not cultivated in the Konkan as a field crop, nor even as a market crop in gardens, but it occurs in small numbers in many private gardens, and I have seen specimens that seemed to me to be self-sown, and afterwards taken care of by the gardeners." This is the only positive evidence of the existence of such cultivation in British territory in the Bombay Presidency, though there are to be found hints that it is carried on to a very small extent in the Ahmednagar and Dharwar districts in the present day, and some definite information that it was formerly practised more widely. It seems certain that the extent of it in British territory is now absolutely insignificant.

Hcme cultivation is rare.

128. The Bombay Presidency contains a great number of Native States whose lands are intermixed with British territory in a very complicated manner. Sometimes they are constituted into separate political charges, and some are under the political supervision of Collectors of British districts. In the Southern Maratha Country, Kolhapur with many smaller States forms a political charge covering a very considerable area. The leading State has prohibited the cultivation of hemp, but the following minor States allow it with in some cases the restriction of a

Native states.
The south of the Presidency.

license and the regulations as to sale of the produce which exist in British territory :—

	Acres.
Sangli	44
Miraj (junior)	13
Jath	30
Jamkhandi	60
Total ...	147

There are also ten acres of regular cultivation in the Aundh State under the Satara Agency, which lies in the Deccan Division. There is no information of any homestead cultivation in the States in the south of the Presidency, nor of field cultivation in any State except those named above.

The north of the Presidency.

129. Turning northwards, there is no evidence of any cultivation till Baroda is passed. This State is under the direct control of the Government of India, and may be dealt with separately. In the Rewa Kantha Agency the plant is not cultivated at all. In the Palanpur Superintendency the authorities of Palanpur and Radhanpur report that there is no regular cultivation, but the plant springs up spontaneously to a very small extent in irrigated lands, and in fields situated on river banks and beside water. The information seems to imply that the plants are tended, and from Palanpur it is stated definitely that the plant is sometimes grown in gardens. It may be noted that a small import of bhang from Palanpur into the Bombay district is said to occur. The same state of things probably prevails in the Mahi Kantha Agency; for though it is reported from Idar, the principal State, that there is no cultivation, the Native Assistant to the Political Agent states that the plant is not cultivated "to any extent," clearly implying that there is some cultivation. And matters are not very dissimilar in Kathiawar, for the Assistant Political Agents in charge of the Halar and Gohilwad Prants write that there is no cultivation for the market, but in some places a few plants are reared in sugarcane fields and *wadas* for home consumption and gifts to holy men. The report from the State of Cutch describes similar cultivation. A witness of Hyderabad (Sind) states that ganja is imported from Panvel and Cutch. This may, and probably does, mean that it comes through Cutch from Panvel, a place near Bombay, where a wholesale business is carried on.

Sind and Khairpur.

130. There is a certain amount of cultivation in Sind for bhang, principally in the Shikarpur district, and some in the Khairpur State also. The average areas for quinquennial periods during the last twenty years and for the year 1892-93 are given below :—

		Acres.
Karachi ...	1st period	87
	2nd „	95
	3rd „	140
	4th „	81
	1892-93	65

		Acres.
Hyderabad	1st period	15
	2nd „	...
	3rd „	5
	4th „	14
	1892-93	3
Shikarpur	1st period	164
	2nd „	175
	3rd „	143
	4th „	166
	1892-93	231
Upper Sind Frontier.	1st period	3
	2nd „	Fraction.
	3rd „	„
	4th „	„
	1892-93	...
Khairpur...	1st period	156
	2nd „	151
	3rd „	168
	4th „	84
	1892-93	38

There has never been any cultivation in the Thar and Parkar district. The total for the first period is 425 acres as compared with 337 acres for the year 1892-93. There has been a remarkable falling off in recent years in the Karachi district and the Khairpur State, and 350 acres may now be taken as the normal area of cultivation in Sind. The cultivation of isolated plants near houses would appear to be extremely rare. The evidence does not speak of it.

Aden.

131. The hemp plant is not cultivated in Aden at all.

Berar.

132. The cultivation of the hemp plant was not restricted in Berar until 1875, and in that year a system of granting licenses, subject to a fee of Rs. 8 irrespective of area, was introduced. The system was modified in 1884, when the license fee was raised to Rs. 10 per acre. The total area cultivated since 1877-78 has been—

	Acres.		Acres.
1877-78	85	1885-86	106
1878-79	94	1886-87	58
1879-80	241	1887-88	38
1880-81	139	1888-89	67
1881-82	143	1889-90	60
1882-83	84	1890-91	35
1883-84	87	1891-92	46
1884-85	80	1892-93	86

And it has been confined to three districts in all but the first of these years, the figures for the last year being—

		Acres.
1892-93.	Akola	51
	Amraoti	22
	Buldana	13

Akola has always had the greatest area under the crop, the second place being taken by each of the other districts in different periods. There appears to be a tendency for the cultivation to increase in the last three years, which is probably connected with the fact that in some *talukas* foreign ganja is being imported, showing that the present production is not sufficient for the home market. Illicit cultivation hardly exists at all.

Ajmere.

133. The memorandum from Ajmere reports an insignificant amount of cultivation for the production of bhang. In 1886 the total area was reported to be 4 *biswas*. There is no restriction on cultivation, but it is only carried on by *malis* and Hindu ascetics, and the Brahmans of Pushkar. The District Superintendent of Police says that the produce has fallen to 40 maunds, and the Abkari Inspector also states that the cultivation is on the decrease. The extent of it would appear to depend a great deal on the character of the season.

Coorg.

134. In Coorg cultivation is allowed under license, but no one undertakes it openly. The spontaneous growth that springs up near the huts of coolies and wild tribes, the Yeravas and Kurubs, is sometimes fostered and tended. From the account of cultivation given by witnesses (1) and (2), it would appear that the plant is sometimes sown deliberately, and treated with some care. The extent of the whole cultivation must, however, be very trifling. It is reported that there have been eight prosecutions for illicit cultivation in the last two years.

Baluchistan.

135. The Political Agent and Deputy Commissioner of Quetta and Pishin reports that the hemp plant is cultivated to a very small extent in one or two villages of the Quetta Sub-division, and that the produce, which is sold to the contractor, amounted last year to 12 sérs. In his evidence the Deputy Commissioner mentions the cultivating village Ahmed Khanzai. The small quantity of the drug produced would seem to indicate that it is charas. The Political Agent, Kalat, states that the plant is not cultivated on land under the administration of the Political Agent, and that an insignificant amount is grown in the territory of the Khan of Kalat. These facts are corroborated by one witness.

Burma.

Extent of cultivation before the prohibition.

136. It has already been seen from the evidence of Mr. Lewis (19) that the hemp plant was formerly cultivated in Upper Burma. And it would appear to have been cultivated on a considerable scale, for it was the sole source of supply to the shops in Lower Burma. The information collected by Mr. Bridges, Commissioner, Eastern Division, though it shows that under Burmese rule the plant was not uncommonly reared in yards and gardens, does not convey any idea of the extent of the cultivation in the days before prohibition, when the crop must have been worth grow-

ing on the frontier of Lower Burma. The Deputy Commissioner of Mergui states that in those days the plant was cultivated in parts of the Tenasserim township, and some other localities in that division of the province. The Deputy Commissioner of Pegu also writes that before the prohibition the hemp plant is reported to have been abundantly cultivated in Bassein district, and in small quantities in Pegu.

Extent of cultivation in the settled districts at the present time.

137. It does not appear that the Burmans proper were ever given to the hemp drugs, and it is not therefore surprising that the more extensive cultivation in Upper Burma should have ceased with that of Lower Burma directly the prohibition was passed and the market in Lower Burma was closed. Some survival of the practice which supplied the shops is, however, indicated in the evidence of Mr. Tarleton, District Superintendent of Police of Thayetmyo (29), who says that "certain villages round Tindau and Thetngaibyin in the Allanmyo Sub-division are in the habit of trading in ganja, which they bring into Allanmyo and Thayetmyo and sell to natives of India." Unfortunately this witness was unable to attend in answer to the invitation of the Commission, and they are therefore left in doubt as to the precise value of the statement. Mr. Bridges states that he has frequently noticed in the diaries of excise officers in Upper Burma references to the cultivation of ganja; and again—"In Upper Burma the growth of the plant in a small way by consumers for their own use is general, but the consumers are few." Mr. Fowle, Sub-divisional Officer, Kyauktau, in the Pegu district, reports that the hemp plant is grown in back gardens in the Wuntho township at the base of the spurs of hills radiating from the Maingthong peak. Other official witnesses state that a few plants are still occasionally cultivated in secret, and that prosecutions are sometimes instituted on this account. This testimony comes from Lower as well as Upper Burma. But it appears on the whole that the practice is efficiently checked in the settled districts. The districts of Thayetmyo, Meiktila, Kyauksé, and Mandalay are perhaps indicated as those in which it is most prevalent. It is of course impossible under the circumstances to form any estimate of the extent of this cultivation.

Cultivation on the frontier and in the remoter regions of the province.

138. The Deputy Commissioner of Mergui mentions the cultivation of the plant in Siam beyond the frontier of Burma. The Commissioner, Eastern Division, and the Inspector-General of Police speak of cultivation in the Danu country which lies between Burma and the Shan States proper, and part of which is British territory. A former chief of the Shan State of Nyaungwe describes the cultivation in his own country, which is probably typical of the practice of the Shans over a much larger area. At this point the Kachin tribes appear to be mingled with the Shans, and their habit of growing the hemp on a considerable scale for fibre is described by Mr. Bridges and the ex-Sawbwa of Nyaungwe. This habit probably adheres to the Kachin race in their own country to the north, and there is no apparent reason why it should not be found over the continuous mountain tract which stretches up to the Province of Assam. In the Danu and Shan country the cultivation is of the homestead kind; a few plants only are reared in each case for home consumption. The practice is more common among the Danus than the Shans, and the produce would appear to be more than sufficient for home consumption, for some quantity

is smuggled into Burma. In the Upper Chindwin district there is a small amount of secret cultivation.

Mysore.

139. In the civil and military station of Bangalore the cultivation of the hemp plant is prohibited, and in the last seven years there have been two or three prosecutions for breach of the regulation. There can be no cultivation except a stray plant here and there. The Mysore laws provide that hemp may be cultivated under license. Cultivators appear to have made two or three unsuccessful experiments, and to have abandoned the idea of growing the plant as a regular crop. This information is furnished in the memorandum of the Excise Commissioner. Mr. McDonnell, the Special Assistant Excise Commissioner, who seems to have made a study of the whole subject of the hemp drugs, describes the method by which a superior quality of ganja is produced locally, and he thinks that its great value in the market as compared with imported ganja must be a strong inducement to clandestine cultivation in yards and gardens. He is evidently of opinion that this is not at all unfrequent, especially in towns and large villages where concealment is more easy. He is corroborated in some degree by other information. The Excise Assistant Supervisor, Tumkur district, says, however, that the hemp plant "is cultivated for the production of ganja, but to a very small extent, all over the province. The extent of cultivation has considerably decreased since the introduction of the rules.....for regulating and restricting the cultivation, possession, sale, import, and export of ganja;" and this must be clandestine cultivation, for it seems certain that no licenses have been taken out. The Sub-divisional Officer, Chick Ballapur, says: "The local cultivation and preparation of ganja are at present confined to the Chintamony taluk." On the whole, however, it would appear that the cultivation is inconsiderable, and the local production quite insignificant.

Hyderabad.

140. The official memorandum of the Hyderabad State reports that no license is required for cultivation, but it is understood that the produce must be sold to the farmer of the monopoly. Only enough is grown for local wants: the cultivators are few because special knowledge and skill are required for the cultivation. No statistics are supplied. The Director of Agriculture and Commerce states that the land under ganja in the whole dominion may be roughly estimated at about 300 or 400 acres. The cultivation is carried on in a small tract immediately south of Hyderabad and in the Aurangabad and Nandair districts, which lie on the north bordering Khandesh and Berar. By another informant the Indore district lying between Nandair and Hyderabad is mentioned, and another states that in Mahratwada and the Canarese districts, which latter must lie on the south and south-west of the dominion, it is grown to about the same extent as tobacco. The information gives the impression that only small plots are sown by each man. Besides this regular cultivation, a few plants may occasionally be reared in yards and gardens, but the produce from unskilful cultivation is said to be very inferior. About 350 acres may be taken as a fair figure for the whole State. One informant speaks of fluctuation in the extent of cultivation, and attributes a slight increase to the class of fakirs and gosains becoming more numerous.

141. The memoranda from the marginally noted States show that, except in Dholpur, no attempt is made to regulate the cultivation of hemp. In Dholpur permission is required to cultivate, and it appears that no one asks for it, and that there is consequently no cultivation. In all the other States cultivation for the production of bhang only is reported. Only five States furnish figures from which to judge of its extent—*viz.*, Jhallawar 30 acres, Jaisalmir 11 acres, Jeypore 10,000 maunds, Bikanir 3 bighas, and Shahpura 25 bighas. The Jeypore figure, if not a clerical mistake or error of calculation, indicates a large rural consumption, for the following quantities only are accounted for as being exported or sent to the capital:—27 maunds exported, 50 maunds transported, and 300 maunds imported from districts into the city: total 377 maunds. The statistical table at the same time shows an import of 354 maunds of bhang and no exports. In the first four States here named the cultivation would appear to be of the more systematic kind. In Shahpura and the rest of Rajputana the plant is sown in gardens either in small patches or in favourable positions, such as the sides of water-channels, or scattered among and around other vegetables. The figure given for Shahpura is an estimate of the aggregate quantity of this kind of cultivation. It appears that in Serohi a contribution is levied in kind from the cultivators and presented to the temples of Mahadeo. The average of these contributions for ten years was one maund of ganja and forty maunds of bhang. A witness from Bhartpur states that the plant was formerly cultivated, but is not now, and the official return shows no cultivation. Here only and in Bikanir is there any evidence of fluctuation in the practice, and in both instances decrease is indicated. The plants seems to require irrigation everywhere, and over a great part of the Agency water is scarce. This must operate as a check to cultivation. As a broad general description, it may be said that the plant is cultivated for the production of bhang all over Rajputana where irrigation is possible, and that, except in Jhallawar, Jaisalmir, and Jeypore, it is never sown in large patches, but appears as scattered plants in vegetable gardens.

Rajputana.

Kotah.	Jhallawar.
Jeypore.	Kishengarh.
Bikanir.	Kerowli.
Alwar.	Dholpur.
Serohi.	Jaisalmir.
Jodhpur.	Bundi.
Shahpura.	Tonk.

142. The information from the Central India Agency is scanty. The return from the Indore State shows that from 1873-74 to 1878-79 the area of cultivation exceeded 300 bighas. It then fell suddenly to below 100 bighas, and never reached that figure again until 1888-89. The average of that and the following four years is 180 bighas ($\frac{5}{8}$ acre). The cultivation has during this period been about stationary. It is confined to the few mahals in the Nemad district bordering on the Narbada, and to a small tract north of Indore. The State puts no restriction on the cultivation whatever.

Central India.

Extent of cultivation in Indore.

143. Enquiry made by the Commission shows that in the Antri pargana of the Gwalior State the cultivation amounts to 265 bighas, and that there is cultivation in other parts of the State as well, extensive in Ujjain and Sipri. The average rent of land fit for the growth of hemp is Rs. 5 per bigha, and an additional tax of Rs. 6 per bigha is levied on the cultivation. There seems to be no other restriction on the cultivation, which has a slight tendency to increase. It is stated in a report attached

Extent of cultivation in Gwalior.

to the North-Western Provinces memorandum that ganja is grown in three tahsils of the Gwalior State—Antri, Sipri, and Kalaras,—and that the areas cultivated last season were respectively 250 bighas, 253 bighas, and 300 bighas, a bigha being one-half of an acre. The total comes to about 400 acres.

Extent of cultivation in Dewas and other States.

144. In Dewas the cultivation for ganja amounts to 39 bighas and for bhang to 9 bighas. In Baghelkhand and Bhopawar the cultivation is reported to be limited; in the latter division it serves for home consumption only. Dr. Caldecott, Agency Surgeon, Western Malwa, states that cultivation occurs all over Malwa, *i.e.*, the south-western portion of the Central India Agency, for the production of charas, bhang, and ganja, and that it is commonly grown along with tobacco. The reference to charas suggests that this wide statement must be accepted with caution, for charas is certainly a rare product in these parts.

No extensive cultivation in other States.

145. In the correspondence of the last few years relating to the production of the hemp drugs and in Dr. Watt's dictionary, the cultivation of Indore and Gwalior is more prominently mentioned than that of other States. It may be inferred that in comparison with the production of these States that of other States in Central India and Rajputana is unimportant, though it is possible that ganja may have been exported from Central India as the product of Indore and Gwalior when it was really cultivated in some other State. But this does not appear likely. It is probable that the production of other States is not much more than enough to supply local wants. But in the Central Provinces evidence from the Saugor district mention is made of smuggling from the Central India States. The Excise Commissioner of the Central Provinces also writes (in his memorandum) that in one village of the Panna State ganja is freely grown, and that it is also grown in Rewah. The cultivation in Rewah is also mentioned by witnesses from the North-Western Provinces, the Joint Magistrate of Jhansi (32), and a mafidar of Banda (215). Besides Rewah, the states of Panna, Chattarpur, Ajaigarh, and Charkhari are indicated. Mr. Wall, Excise Commissioner of the North-Western Provinces, stated in his report No. 273-E., dated 22nd November 1883, that the Jhansi and Lalitpur districts drew their supply of bhang from the Native States of Dattia, Tehri, Gwalior, and Chattarpur. But there is not sufficient information to enable any estimate to be formed of the extent of cultivation in any but the States for which figures have been given. There is neither report nor evidence regarding the important State of Bhopal on this point.

Ascertained area of regular cultivation.

146. The area of regular cultivation ascertained with some certainty is therefore—Gwalior 400, Indore 115, Dewas 25: total 540 acres. In the other States there may be small areas of regular cultivation, but the most of it is probably scattered and of the desultory sort, a few plants here and there in fields, gardens, and home enclosures.

Baroda.

147. The Baroda report states that "it is said that this plant was sown largely in various places. But the restriction placed by the British Government on exportation obliged the cultivators to give up cultivation. It is now cultivated in one village,

Bhadran, where bhang is made for home consumption. No narcotic hemp is cultivated either for the production of charas or its flowers or seeds." The area is about 10 to 12 bighas. It is also found in the compounds of sadhus, fakirs, and other people who consume ganja or bhang. There is no reason to suppose that this latter kind of cultivation is very common.

Kashmir.

148. The Governor of Kashmir and Jammu and the Member of Kashmir State Council report that the plant is not cultivated. It appears that the wild growth is abundant enough, and develops the narcotic properties in sufficient degree to satisfy the wants of the people.

Nepal.

149. The answers to questions received from the Nepal State through the Resident, while alleging that no one cultivates ganja, describe how the wild plant is nurtured and treated, sometimes, it would appear, after being transplanted. This treatment is said to require special skill (questions 2 and 10), and the inference is that the industry is not followed by any large number of persons. The Bengal evidence shows that Nepal charas used formerly to be consumed in that province, but has now given way to that from the Punjab. But it is reported from the North-Western Provinces that 25 to 50 maunds are still imported into Lucknow. It would seem, therefore, that the industry is not inconsiderable. In Royle's *Fibrous Plants of India* will be found quoted a report from Mr. Hodgson, which shows that in the northern districts of Nepal the plant is pretty extensively grown for fibre.

Summary.

150. The following table shows the total area of hemp cultivation in India as far as it has been possible to state definite figures:—

Extent either ascertained or estimated of cultivation in the various Provinces and States.

Province or State.	Area in acres.	For what product.	Remarks.
Bengal	824	Ganja ...	Average, five years.
North-Western Provinces—			
Farakhabad and Hardoi ...	190	Bhang ...	Average, do.
British Kumaon and Garhwal	830	Fibre ...	Reported.
Punjab	100	Bhang ...	Reported.
Central Provinces	950	Ganja ...	Average, ten years.
Madras	350	Do. ...	Reported.
Bombay—			
British Territory... ...	1,000	Do.	Average, five years.
Native States	157	Do.	Reported.
Sind and Khairpur	345	Bhang ...	Average, five years.
Berar	58	Ganja ...	Average, do.
Ajmere	5	Bhang ...	Estimated.
Hyderabad	350	Ganja ...	Estimated.
Rajutana—			
Jhallawar	30	Bhang ...	Reported.
Jaisalmir	10	Do.	Reported.
Shahpura	25	Do.	Reported.
Central India—			
Indore	112	Ganja ...	Average, five years.
Gwalior	400	Do.	Reported.
Dewas	25	Do.	Reported.
Baroda	8	Bhang ...	Reported.
Total ...	5,769		

The only cultivation of any moment which has been omitted is that of those States in Rajputana and Central India which have not been mentioned in the table, and the irregular kind of cultivation which is carried on in the Madras Presidency, the Garhjat States of Bengal, and the plains of the North-Western Provinces. There is also a considerable area of fibre cultivation in the Native States and British territory in the Himalayas which has not been taken into account, and probably amounts to some hundreds of acres. Deducting the fibre cultivation, which yields but little of the drugs, from the total area given in the table, and making allowance for the narcotic cultivation which has been omitted, the total area of cultivation in India for the drugs can hardly exceed 6,000 acres. The total Himalayan cultivation for fibre of the Punjab and North-Western Provinces in the region extending from the borders of Nepal to those of Kashmir may be taken on a liberal estimate at nearly double that of Kumaon and British Garhwal, or 1,500 acres. It cannot be said that the regular cultivation either of the mountains or the plains is shown to be increasing or decreasing. In British territory the desultory kind of cultivation has either been suppressed, as in Bengal, Assam, the Central Provinces, and Berar, or has disappeared, as in Bombay, or is being abandoned as in Madras, the North-Western Provinces, and the Punjab.

CHAPTER V.

METHODS OF CULTIVATION AND MATTERS CONNECTED THEREWITH.

151. Before describing the cultivation of the hemp plant, it will be proper to mention the products which are got from it. It has been shown that the plant which yields the true hemp fibre is the same as that which produces the narcotics. The seed is the familiar hemp seed which is given to cage birds. It is also occasionally eaten by the natives of India, especially in the Himalayas, and an useful oil is expressed from it. The fibre and seeds only come incidentally within the scope of the present inquiry. The narcotic products of the plant are ganja, charas, and bhang. Dr. Prain has described very fully the physiological processes by which the narcotic principle is secreted in the various parts of the plant. For the purposes of the Commission it is sufficient to state plainly and briefly what the three articles are in the simple forms in which they first enter the market. The definitions with which the Commission's list of questions is introduced are as follows. They are borrowed from Dr. Prain :—

Definition of the narcotic products of the hemp plant.

"Ganja consists of the dried flowering tops of cultivated female hemp plants which have become coated with resin in consequence of having been unable to set seeds freely."

"Charas is the name applied to the resinous matter which forms the active principle when collected separately."

"Siddhi, bhang, subzi, or patti are different names applied to the dry leaves of the hemp plant, whether male or female, and whether cultivated or uncultivated."

These definitions have been generally accepted by the witnesses, but the result of the inquiries is to show that they require some explanation. First, with regard to ganja.

152. Over nearly the whole of India distinction is recognised between the ganja and the bhang plant. Though the natives may mistake the sexes, it is clear that the female plant is the one which is called ganja and the male plant bhang. The plants are distinguishable even in the wild state, the loose flowering panicle of the male from the comparatively stiff and apparently blossomless spike of the female. The hill ganja of Assam, and the wild ganja that seems to be occasionally found and used throughout Eastern Bengal and the Sub-Himalayan region, and even in Kashmir, must be the female flower spike which has often been quite innocent of any tending. In examining the evidence, therefore, the definition of ganja given above must often be read as with the word *cultivated* omitted.

Ganja may be got from the wild as well as the cultivated plant.

153. Then as regards bhang, the witnesses often use the word to include the female flower head as well as the leaves of the plant, and the green leaves as well as the dry. The male flower head must also enter into it in consequence of the rude method of preparing the drug, *viz.*, by drying the plants and beating out the leaves. But the male flowers are not more narcotic than the leaves; the point to be noted is the inclusion of the female flower head in bhang. The confusion arises from the name of the product bhang being used also for the liquid form in which the hemp drugs are consumed. Ganja pounded up and made into drink becomes bhang. This is the way in which Garhjat ganja is used at Puri. In the west and south of India the distinction between the products bhang and ganja is frequently

The drug bhang often consists of ganja.

lost. Bhang is cultivated in Sind with similar precautions to prevent the fertilization of the female plant as in Bengal, and the product is called nothing but bhang, and is rarely used for anything but concocting drink and sweetmeats, the smoking ganja being imported. Bhang is the ancient name of the plant. It is also the name of the form of narcotic product which was earliest discovered, for it must have taken time to learn the art of isolating the female plant and so producing ganja. Bhang is also the name of the most simple style of consumption, *viz.*, by pounding and drinking, which must have preceded smoking. Naturally, therefore, bhang is a more comprehensive term than ganja, and often includes it, especially where the production of ganja has not become a recognised industry. In the Madras Presidency ganja is the more general term, so much so that in some places the word bhang is hardly understood. This is probably due to the hemp plant being only known to the people as cultivated for the production of ganja.

Charas is not always the simple resin.

154. Charas may not always be the pure resinous matter. It generally contains leaf dust and other impurities picked up in the process of manufacture. But it is hardly ever confounded with ganja or bhang. Its appearance, that of dark green or brown paste, is distinct from that of both the other drugs. In Kashmir and the Punjab only is the name ganja sometimes applied to charas, probably because charas is prepared from the female or ganja plant (Governor of Kashmir). There is reason to think that in some parts of Rajputana the distinction between charas and ganja is not very strictly observed, and that the former name is occasionally given to the latter drug.

Bengal.

155. In Bengal the hemp plant is grown solely for the production of ganja in the area of regular and licensed cultivation. The illicit cultivation which is to be found in insignificant quantity all over the province, and the character of which has been described, yields for the most part bhang and not ganja fit for smoking. Ganja of inferior quality is produced in the Tributary States of Orissa in considerable quantity. In the Tributary States of the Chota Nagpur Division ganja of the same quality is produced, but in less quantity. The cultivated product of Hill Tippera appears to be still lower in the scale as regards quality, and very little in quantity. It is proposed now to describe the skilled cultivation of the Ganja Mahal, where the agricultural processes for the growth and preparation of ganja have undoubtedly been brought to greater perfection than in any other part of India, and, as far as information will allow, the more homely practices prevailing outside that tract. Babu Hem Chunder Kerr's report contains a detailed account of the Rajshahi cultivation ; Dr. Prain has given a brief outline of the mode of culture ; and Mr. Price, Collector of the district of Rajshahi, has submitted a sketch of the cultivators' business during each month of the year. Babu Hem Chunder Kerr's report is the basis of the information furnished by most witnesses. Endeavour will be made to compile a succinct account from these materials.

Regular cultivation of the Ganja Mahal : Preparation of the field.

156. Hemp is an exhausting crop, and requires a light, well-drained soil. It appears that there is but a limited quantity of thoroughly suitable ground in the Ganja Mahal, and that there is a tendency to abandon the outlying lands and concentrate the

cultivation about Naogaon. The ganja plant is reared in a seed bed or nursery and planted out into the field. The field is selected between January and the middle of March, and must be one which has lain fallow, or has borne nothing but light crops, such as pulses or mustard, during the two previous years. It must not be overshadowed by trees. It is first ploughed to remove weeds and stubble as thoroughly as the cultivators' means will allow. In April and May the field is liberally dressed with fresh surface earth from surrounding lands, the quantity used depending on the quality of the field. The turf and weeds on the sides of the field are next dug up in clods and thrown on to the field, the holes thus made being filled up with earth from the ditches. The field is thus cleaned to its extreme boundaries, and the weeds utilised as dressing for the land. In this process a small bank about nine inches high is raised round the field. The fresh earth added to the field becomes desiccated in a week or so, and then cow-dung manure is added and the field well ploughed again. From this time till September ploughing, followed by harrowing with the bamboo ladder, is carried out from time to time, the belief being, as Babu Hem Chunder Kerr says, that the oftener the land is ploughed the better is the crop. A channel is made to keep the field well drained.

The nursery conditions requisite to the germination of seed and growth of seedlings.

157. The details given by Babu Hem Chunder Kerr regarding the selection of the seed bed have special interest in connection with the subject of the spontaneous growth. He writes: "A plot of land near the homestead of the cultivator is generally made available for a nursery, and the people in order to make themselves sure of its dryness always make a point of using those lands only in which a tuberous-rooted, grass-like vegetable called *matha* (*Cyperus rotundus*, L.) grows. The growth of *matha* is, in their opinion, a sure sign of the land being quite dry." In another place Babu Hem Chunder Kerr says: "The nursery or seed bed consists of a plot of high, light, sandy loam." The selection of this plot is made in May, and as soon as one or two showers have fallen it is ploughed. The ploughing is repeated three or four times each month till August. The object is complete pulverisation of the soil, and, if necessary, the bamboo ladder in addition to the plough is passed over the land for this purpose. Manure is not used, and the land must be quite free of shade of any kind. The seeds are sown broadcast on a fine day after a ploughing, and the sowing is followed by harrowing to cover the seed. The bed is carefully drained. The following remarks from Babu Hem Chunder Kerr's report are quoted to show certain idiosyncrasies of the plant for the same reason that the previous *verbatim* extracts were made: "Seeds are not sown on either a rainy or even a cloudy day when rain is apprehended, as the wet ground rots them. Even if it rains three or four days after the seeds have been sown, most of the seeds are destroyed, as the earth gets hardened into a cake after the rain, and the germs cannot force their way through it. In such a case fresh seed has to be sown in another nursery again..... Nor is the grass weeded out at any time after the sowing of the seeds. They are also never irrigated. The cultivators are of opinion that the growth of grass in the seed beds is beneficial to the young plants, inasmuch as it protects the latter from the action of the wind."

Transplanting.

158. Towards the end of August or beginning of September the field is again dressed with cow-dung, refuse, and house-sweepings. About a week or ten days after this comes the day

for planting out. The field is ploughed and harrowed, and made into ridges "well smoothed and beaten down with the hand," and the seedlings are planted out. All this is done on the one day for fear that the soil which has been so thoroughly pulverised should get too dry.

The seedlings prefer high and dry soil.

159. It is necessary to again quote *verbatim* from Babu Hem Chunder Kerr for the same reason as before : "The number of ploughings is regulated by the nature of the soil, *khear* or clayey lands, in which hemp is occasionally grown, requiring more frequent ploughing than fields of *poli* soil or light, sandy loam, which form the majority of the ganja beds. The seedlings at the time of transplantation are from four to five weeks old and from six to twelve inches high. The smaller ones are collected for higher and drier fields, in which they are enabled to throw out their roots much quicker and easier, and grow up much faster than in low fields, the soil of which is somewhat heavy owing to the existence in it of a greater amount of moisture, which retards the growth of very tender plants..... If rain falls within three or four days after the transplantation, it proves injurious to the young plants, the roots of which, not having taken any hold upon the soil, rot and die away."

Treatment of crop between planting out and removal of the males.

160. The operations of the next few weeks are thus described by Dr. Prain: "A month or so after transplantation, about the middle of October, the fields are carefully weeded; a fortnight later, beginning of November, the ridges are hoed down as far as is possible without injuring the roots of the hemp, which are then well manured with oil-cake, or a mixture of cake and cow-dung, and the ridges rebuilt over the manure. About the middle of November the plants are trimmed by the removal of the lower branches; this helps to give the plant the pyramidal shape that ensures the flowering tops being as close together as possible, obviates the formation of ganja close to the ground, where it would certainly get covered with sand and mud, and finally admits of another course of ploughing and harrowing with a narrow ladder between the ridges; this course immediately follows the trimming, and is itself followed by a second course of manuring with powdered cow-dung and oil-cake, after which the ridges are again rebuilt."

The elimination of the males.

161. At about this stage the detection and removal of the male plants is begun. An expert is required for the work, either the professional *poddar* or *parakhdar* or the cultivator himself if he has acquired the necessary skill in distinguishing the male from the female plants. The exact differences by which the plants are distinguished by the experts cannot be described with confidence. The operation takes place before the flowers are developed; and Babu Hem Chunder Kerr says that the inspection is invariably made in the morning so as to have a good light, which shows how fine these differences must be. The *poddar* breaks over the plants which he decides to be male, the cultivator plucks them out, and fills the blank spaces with plants from the parts of the field where they are left in greater number. Then follows the first irrigation, which is regulated so as to moisten the ridges, but leave no water standing in the furrows. The *poddar's* visit may be repeated two or three times, and the field may be irrigated from three to six times in the following few

weeks. The cultivator himself is always on the look-out to detect and remove male plants which may have been overlooked at the regular inspections. Between the first and second irrigations the ridges are hoed and the field manured a third time.

Maturing of the crop and detection of abnormal females.

162. Babu Hem Chunder Kerr states that the male plant begins to flower in November and the female plant in the beginning of January, and Dr. Prain adds that from the time the latter flowering begins "the cultivator is on the outlook for those abnormal male flowers on his female plants which the *poddar* could not possibly have foretold." The ganja begins to ripen about the middle of February, "the state of maturity being indicated by a brownish appearance and the falling off of all the larger leaves." The Commission visited Naogaon on the 16th February, when the harvest was in full swing.

The Bengal cultivator misnames the sexes.

163. There are one or two matters in which the ways of the Bengal cultivator are different from those of the people of other provinces. They talk of the ganja-bearing plant as the male and the pollen-bearing plant as the female. In the Central Provinces and the west of India the cultivator seems to have learnt more of the principles of fructification in plants, and generally calls them by their true sexes. The existence

The khasia plant not discovered outside Bengal.

of the *khasia* (emasculated) plant, which Babu Hem Chunder Kerr calls hermaphrodite, and Dr. Prain describes as "functionally defective," "useless but innocent," and "collated, as its name implies, with the sex to which it really belongs," has apparently no parallel at Khandwa in the Central Provinces. The plant is left standing at harvest, or rejected from the heap if it has been gathered by mistake. The Bengal cultivator does not grow a crop specially for seed as is done at Khandwa. He uses the grains that fall from his ganja in the processes of manufacture, which are very numerous, notwithstanding all the pains that have been taken to eradicate the male plants.

The Bengal cultivator does not grow a seed-crop.

Cultivation not confined to any class.

164. The cultivation of hemp in the Ganja Mahal is a practice that is handed down from father to son in common with so many arts and industries in this country. Beyond this the industry cannot be said to be confined to a class. Musalmans very largely preponderate among the cultivators in about the proportion of 7 to 2 according to Mr. Price. There is no evidence that the occupation is held in contempt, a point which Dr. Prain has discussed at pages 47 and 48 of his report. Babu Hem Chunder Kerr entered fully into the details of cost of cultivation and the profits of the cultivator. He estimated the former at Rs. 50 to Rs. 60 and the latter at Rs. 25 to Rs. 50 per bigha. There is no equally good information of more recent date. Ganja ranks as one of the superior crops.

Rain damages the crop when it is maturing.

165. Babu Hem Chunder Kerr notices a fact which appears repeatedly in the evidence from all provinces that "when the plants begin to flower in clusters and the resinous matter is formed, rain spoils the ganja." The quantity and superiority of Central Asian charas is said to be due to the dryness of the climate in that region. This is a point of considerable interest as a possible explanation of the inferiority of the drug when cultivated in the rainy season. There is no evidence of cultivation

in the Darjeeling district for fibre. From the evidence relating to other parts of the Himalayas, it is improbable that such cultivation does not exist.

166. Though there is not any great amount of illicit cultivation, it will be interesting to note the information furnished by reports and evidence as to the methods employed in it. Mr. Basu, Assistant to the Director of Land Records and Agriculture, reports that he observed signs of the spontaneous growth where it was not plentiful being looked after with some degree of care. Talking of Bhagalpur and Purnea, he says: "As a rule the people of these districts could not distinguish between male and female plants, the leaves of both being used as a bhang; but one man pointed out to me a plant which was a female, and said that this class of plants produced the best drug. It is not uncommon to see a few selected plants, mostly females, left on the ground; these acquire a more bushy appearance not unlike that of the ganja-bearing plant. All this made me suspect that the people knew a great deal more about the bhang plant than they were willing to avow." This would lead to the belief that the secret cultivator not unfrequently succeeds in producing smokable ganja. An Excise Deputy Collector describes one method by which the plant is not only concealed from view, but which may result in effectually secluding the female plant. When the plant is a foot high, an inverted earthen pot is placed over it supported by pegs fixed in the ground. The confined growth takes the form of a cabbage-flower (*sic*), and would in all probability retain the resin in more than common quantity. A Burmese witness has described a similar method as being the regular practice in the Shan States. The Registrar of Calcutta (98), enquiring from fakirs and religious mendicants, learns that the wild plant is made to produce ganja for smoking by lightly rolling the flower spikes of the growing plants between the hands, thereby causing the component parts of the spike to stick together, and preventing the access of the pollen. "This treatment, repeated several times, converts the spikes into what is commonly called *jata*, which gives the matted appearance to the article." Witness (53) states that he has seen ganja plants cultivated illicitly from the twigs of which ganja as good in appearance as excise ganja can be prepared, but the flavour of it is alleged to be inferior. There is not in the evidence, however, any general confirmation of the supposition that the illicit cultivation produces the stronger form of the drug. The matter will be further examined in dealing with the preparation of the drugs.

Irregular cultivation. It may yield ganja, but probably does not often do so.

There are not, however, sufficient grounds for supposing that the homestead cultivation or the fostering of the wild plant is carried on on any extensive scale. It is not often that either practice produces anything superior to bhang, and where there is an unlimited quantity of good bhang growing wild, there can be little inducement to illicit cultivation with its attendant risks. No information has been given of occupants ever being paid for allowing the bhang growing on their lands to be collected, and that incentive to fostering the plant appears to be wanting. It will be seen also that where the wild plant does not prevail, the licit consumption of ganja is comparatively small, and the consumers are therefore few.

167. The Tributary States of Orissa after the Ganja Mahal contain the most extensive and important cultivation in the Province of Bengal. This cultivation has never been made

Tributary Mahals.

the subject of detailed enquiry and report, and the information now given in answer to the Commission's questions is but scanty. It appears to be of the homestead sort, and limited to a few plants in each plot. The only suggestion offered that it is sometimes conducted on a larger scale comes from the Sub-divisional Officer of Jajpur in Cuttack (52), who says: "If the lands be small, the seeds are sown broadcast; if the lands be large, the seeds are first sown in a nursery plot." Mr. Wylly, Government Agent at Keonjhar, states that the plant is grown in seed beds in April and May and transplanted, which may be regarded as some confirmation of the above witness. If this fact is accepted, the evidence shows that the plants are raised in three ways—either accidentally sown, sown broadcast, or transplanted. At the beginning of the rainy season—that is, in June-July—the plants will be about a foot high, and standing in greater or less number in a plot near the homestead. The plant takes some five or six months to mature from the time it has reached this stage. Mr. Taylor (36), an officer who has served in Orissa since 1866, says that the plants are hoed and weeded, and the roots loosened and dressed with vegetable mould or well-rotted cowdung. Rai Nand Kissore Das, District Officer of Angul, states that the plants are watered when necessary. There is no evidence that the male plants are extirpated. Witness (63) does not speak positively on the point, but it would appear from the evidence of Mr. Wylly that some distinction is made in the treatment of plants of different sex. "The *male* plant," he says, doubtless meaning the *female*, "is emasculated by having its stem punctured or cut, and pieces of broken tile inserted in these cuts." That this process is in vogue is confirmed by Babu Manmohan Chakravarti, who does not, however, make any distinction of sex with reference to it. The plant is subjected to still another operation, which is mentioned by Rai Nand Kissore and Babu Manmohan Chakravarti, without any distinction of the sex of the plant, except that the female plant is indicated by the language used. The former says "nothing more than the twisting of the stem for the production of ganja is done;" the latter, "to prevent over-branching of the flower heads, they are roughly twisted." There is no more information of the treatment of the plant till it ripens and is gathered in December-January. This appears to be the season of growth notwithstanding that Babu Kanti Bhushan Sen makes it synchronous with the Rajshahi season. It cannot be correct, as he states that the plant grows spontaneously from the previous year's seed towards the close of the rainy season, for this is contrary to the habits of the hemp plant in the plains of Northern India, and the fact that the natural conditions at the close of the south-west monsoon do not seem to be favourable to the spontaneous germination of any kind of seed.

The female plants are twisted or mutilated.

168. The summary of the results of the inquiry made by Mr. Grimley in 1890 in the States of the Chota Nagpur Division gives a few details of the method of cultivation in that region. Unfortunately no question was directed to ascertaining the season of growth, and the information on this point is not, therefore, decisive. Sirguja reports that seeds are sown or plants grow during the rainy season. This agrees with the account from the Garhjat States as was to be expected. The practice of transplanting is mentioned from Udaipur. In the answers to the question whether the male plants are destroyed, the sexes are confounded, but it is clear that the general external differences are recognised. Bonai reports that those

Political States, Chota Nagpur. Information derived from an inquiry made in 1890.

plants on which flowers grow are destroyed, and those on which the leaves become intertwined are preserved. The latter description clearly indicates the clustered spike of the female plant. Gangpur reports that the male plants (really female) which produce flowers and fruit are not destroyed, which may well imply that the others are. It may be inferred generally that the practice is not well established or systematically carried out. It is probably in the empirical stage described by Dr. Prain (page 12), and directed to the removal of a plant which is useless rather than mischievous; for Bonai says: "No one can distinguish which is the male or female plant." The answers show also that the male plant is very generally preserved for use as bhang, while the one with intertwined leaves is kept for ganja. The ground is ploughed and dressed, but not apparently treated in any special manner. The splitting of the stem with insertion of a potsherd and the twisting of the plants are practised; but it would appear from the Udaipur answer that the twisting is merely the means of splitting the stem. It is reported from Gangpur that cross incisions are made in the stem with a knife, and "something like opium or other intoxicating thing is put into it, and the interstice is then closed up with earth to increase the power of intoxication." It may be concluded that the method of cultivation does not differ from that in vogue in the Garhjat States.

Mutilation of the female plant.

169. No description is furnished of the cultivation in Hill Tippera, but a well informed witness classes it with that of the Garhjat States. It is not likely that it is more skilful or elaborate.

Hill Tippera.

170. There is no regular cultivation in Kuch Behar, and the homestead cultivation, if there is any, cannot be different from that of the surrounding British territory.

Kuch Behar.

171. There is no regular cultivation in Assam, and the evidence gives no information about the processes employed in the illicit and hill cultivation. Mr. Anderson states that the Miris of Lakhimpur hedge in the wild growth; Mr. Godfrey that the plant is weeded. The cultivators named are, besides the Miris of Lakhimpur, the Nagas of the Sibsagar frontier. Mr. Spicer mentions Kukis, Patnies, and a few coolies, and his evidence relates to the Cachar Valley. The hill tribes of the province and its frontiers may be included in the list, and the coolies generally. The drugs produced are bhang and very inferior ganja. The two things are practically the same.

Assam.

172. There are three classes of cultivation in this province—that carried on in the Himalayas for fibre and seeds with charas as a bye-product, the recognised cultivation of bhang in Farakhabad and Hardoi, and the desultory homestead cultivation which prevails to a greater or less extent everywhere in the plain country.

North-Western Provinces.

173. The first is well described by witness (49) and in the "Field and Garden Crops of the North-Western Provinces and Oudh" by Duthie and Fuller. Mr. Dharma Nand Joshi is Settlement Deputy Collector, Garhwal, and his account is probably based on personal inquiry and observation, and may therefore be quoted. The fields near houses are generally selected for hemp because they are better manured,

Cultivation in the Himalayas.

and the soil must be light. Early in June the field is cleaned of all rubbish which is burnt upon it. It is ploughed immediately after a good downfall of rain. In the beginning of July the seed is sown; and this must be done on a fine day, for the seed will not grow if sown in the wet. Chaff is then scattered over the field to protect the seed from the birds. In eight days the seed germinates, and fifteen days afterwards the crop is carefully hoed so that the plants are not injured. After another fortnight the field is weeded a second time. No other operation is described till September (Bhado), when the plants have grown up, and some have begun to bear seed. These are called "sujango." or "kalango" (according to Duthie "*gul* bhang"), and are the female plants. Some do not bear seed, and are called "phulango" (according to Duthie "*phul* bhang"), and they are the male plants. These latter are plucked up and laid in the sun for a few days to dry, and are then manufactured into fibre. The fibre from the male plant is superior. The female plants have meantime been growing up to a height of some ten feet, of which the upper third is full of leaf and seed. In (Kartik) November the female plants are cut down from the root, and spread in the sun for twenty-four hours to dry. The charas is then got from the plants by rubbing the heads between the hands. This description gives the female plant a life from germination to harvest of little more than four months. Duthie and Fuller put the sowing in May, and this gives a longer life, more nearly approaching the period of growth, about six or seven months, in the ganja tract of Bengal. The latter is probably the more correct.

Class of cultivators: Cultivation is not reputable.

174. Duthie and Fuller write that hemp growing is restricted to the lowest classes of cultivators, being considered beneath the dignity of the higher castes. So much is this the case that the phrase "May hemp be sown in thy house" is one of the commonest of abusive imprecations. Mr. Dharma Nand and other witnesses corroborate this account. The principal cultivators appear to be the Khasias or Tabhilas, a class of people above the Domes and below Rajputs in the social scale, who do not wear the sacred thread. If a Brahman or Rajput wishes to cultivate hemp, he engages a Khasia or Dome to work for him; but, after the crop is taken off, he has no prejudice against making charas or separating the fibres from the stalks. Dr. Prain (page 48) has traced the contempt in which the hemp cultivator is held to the original motive of the cultivation, *viz.*, the production of fibre, and points out that the cultivators of other fibres, such as *sann* (*Crotalaria*), are similarly regarded. Mr. Cockburn (34) confirms this explanation, suggesting that the offensiveness of the operation of rotting the stalks is the origin of the dislike. Unfortunately Mr. Dharma Nand from direct knowledge contradicts this, which might have been a reasonable solution of the question; for he says that the higher classes have no objection to this operation. The origin of the prejudice is probably to be sought in very early social institutions.

The seeds are, next after the fibre, the important part of the products of Himalayan cultivation. They are eaten, and yield oil. The seed of the uncultivated plant is very inferior in size, and is not therefore used for sowing.

The regular cultivation of bhang.

175. There is very little information about the methods employed in the regular cultivation of bhang in the districts of Farakhabad and Hardoi. The crop must be grown in fairly large plots or fields, for it is capable of being measured, and the Agricultural Department apparently keeps a record of the area. The seed would seem to be sown at

the same season as wheat and barley, and mixed in patches with these crops. It is harvested in May after the other crops have been taken off the ground. There is no evidence of the male plant being eradicated.

Secret cultivation.

176. The homestead or desultory cultivation for the production of ganja seems to be carried on for the most part secretly. Mr. Bruce of Ghazipur, referring to his own district of course, states that the cultivation is not carried on openly, and it is therefore difficult to obtain any particulars about it; that the seed is sown broadcast in good soil, and the plants afterwards moved to some enclosed place, such as the courtyard of a house, and carefully tended; and that the female plants are used for ganja. Regarding the practice of eradicating the male plant, the evidence is not decisive, and what there is refers sometimes to the tending of wild growth, and sometimes to the more methodical cultivation. Thus Mr. Ferrard, Magistrate and Collector of Banda, referring to the spontaneous growth on the Gumti river, says that, in spite of close police supervision, "the people continue to keep some plants and leaves, and prepare drugs from them. In such cases the male and female plants are kept separate." He may be talking in this place of the drugs and not the growing plants, for he says further that he has been told that "the male plants are cut down when young and dried, and its leaves form bhang. Ganja is made from the female flower and petals when almost ripe. The plants can grow together until the period of fertilisation." Witness (48) has been told that the male plants are extirpated. On the other hand, the drug contractor of Moradabad (248) had never heard of the male plant being extirpated.

Cultivation for ganja in former days.

177. The information regarding bygone cultivation throws some light on the knowledge of the people and the practice in respect of the removal of the male plant. Witness (61) states that there was a good deal of cultivation formerly at Loohaisar, tahsil Fatehpur, in Barabanki, but it was forbidden. Witness (249), referring to the same cultivation, seems to say that it was grown in a tract called Mahadeva, and this must have yielded the ganja which other witnesses speak of as Mahadeva. Witness (61) gives some details of the methods then employed. The seed used to be sown with wheat and other crops, and when the plants had attained a little growth, the Kabariyas, and they only, were able to distinguish which were ganja and which bhang plants, *i.e.*, female and male respectively. The ganja plants were then transplanted to some suitable spot. He mentions also the practice of twisting the leaves (*sic*) to make the plant produce ganja.

Principal features of irregular cultivation.

178. It is not worth while discussing the evidence of individual witnesses further. It may be inferred from the whole that the distinction between the male and female plants is pretty widely known; that where the spontaneous growth is in small and manageable quantity, and where plants have been sown in suitable places, or transplanted into such places, the female plants often receive special care and have the males removed from among them; and that for the more desultory sort of cultivation it is not very material whether the seed is taken from the cultivated or wild growth, from ganja or from bhang.

Tehri Garhwal and Rampur.

179. There is no information of any methods in vogue in the States of Tehri Garhwal and Rampur different from those of the province generally.

Punjab.
Himalayan cultivation.

180. There is more or less evidence of cultivation of the hemp plant all over the Himalayan portion of the province, including the smaller Native States. The cultivation is in small patches. A report from Kulu in 1880 says: "Almost every house has a small patch near it, a long strip beside a hedge, or a small bed a few square yards long (*sic*) in area." The only other detail of cultivation furnished is that the season of growth is from April and May to October and November. It may be safely assumed that the method of cultivation does not materially differ from that practised in Kumaon, which has been fully described. Whether charas is produced to the same extent may be open to doubt, but the information on the point is defective.

Cultivation in the plains for bhang.

181. Though the extent of cultivation in the Punjab plains is not great, the details of the methods employed in it, which can be gathered from the evidence and papers, may be noted. A memorandum by Hari Chand, Assistant to the Commissioner of Excise, states that "people grow it in both harvests in the months of March and November. They cut plants for use in February and June." The latter named months appear to relate to the period within which the plant is gathered if it is sown with the late or *rabbi* crops. An account of the cultivation is furnished in the appendix of Mr. James Wilson's evidence as having been given him by his Excise Assistant, Mr. Kirthee Singh. The plant is reared for bhang only, never for ganja, and charas is not extracted except rarely for private consumption. The land is usually close to the village, and of the description called *niain*, the same as that described by Duthie and Fuller, when speaking of the Himalayan cultivation, which the daily offices of the villagers provide with a plentiful supply of manure. It is ploughed frequently in August and September, the seed is sown broadcast in the latter month, and the field is watered. The watering is repeated three or four times, and the crop is hoed now and then and kept clear of weeds. The crop is ready to cut in March and April. No distinction is made between male and female plants. The whole is cut and dried together, and the leaves, flowers, and small twigs are then shaken out and form bhang. The outturn is eight to ten maunds a bigha. A little charas is sometimes made by beating the flowering twigs over a piece of cloth laid on the ground. A greyish white powder falls on the cloth which is collected and dried.

A few details of the method of cultivation.

182. This account gives only one season of cultivation, but there are witnesses to corroborate the Assistant to the Commissioner of Excise as to the plants being grown with both the early and late crops, and other fragmentary information is furnished as to the processes employed. Witness (68) mentions the use of goat and sheep dung, and the advantage of sowing four or five seeds together when the plant is to be grown amongst tobacco or garden crops. This would be cold weather cultivation. He also mentions the broadcast sowing, and states that the product of the plants grown in *sailaba* lands is more intoxicating. Witness (26) states distinctly that there are two seasons for the cultivation, from *Kartik* to *Chait* (October-November to April-May), and *Baisakh* to *Sawan* (May to August); and he mentions two curious manures, the "excreta of a serpent" and "decayed swallow-wort." The cultivation is carried on in small plots, and only by the keepers of

takyas and *dharamsalas*, especially by Sikhs. Witness (74) states that transplanting is practised, and that the cultivators are the fakirs and keepers of *dharamsalas* and consumers generally. Witness (67) gives three seasons for cultivation, probably the times of sowing, October-November, February-March, and July-August, and states that the plant is sometimes manured after it has grown a foot or two high. Witness (19) gives the season of sowing as from October to January and the harvest time as March, and states that the crop is cultivated like other *chahi-hatri* crops on *chahi*, *hatri*, or *sailaba* lands. The crop is cut at night to prevent the loss of seed that would otherwise occur. But this witness has not seen the cultivation. Witness (36), Civil Surgeon of Jhang, a native gentleman, has made direct enquiries in his district. The male plant is, he says, extirpated in February and March, and the rest are gathered in April, the cultivators are of the ordinary class, but are in the employ of the fakir consumers, for whom they grow the drug. Witness (24), Excise Officer, states that the seed is sown in November at the same time as wheat. The field is well drained, cleaned, and manured. The bhang seed is soaked in cow's milk and water the night before sowing. It is sown broadcast. The crop is watered. In March-April the male plant called *kera*, which is smaller than the female and bears a flowery head, is eradicated. The female plants are cut with the wheat in May. The cultivators are for the most part fakirs, Hindus and Muhammadans, and the products are bhang and ganja. Mr. Dames (9), Deputy Commissioner of Dera Ghazi Khan, states that the land is well watered before sowing between the months of June and September. The seed is sown between October and January, and the crop gathered in March and the beginning of April. Frequent waterings are required, and the crop must be gathered in at night, or it looses much of its value. It may be concluded that the crop is generally grown in the *rabbi* season, though occasionally in the monsoon; that it requires high tilth, including a liberal supply of manure and irrigation; that transplantation and the extirpation of the male plant are sometimes practised; that the cultivation is for the most part carried on by consumers, of whom a very large proportion are fakirs and religious characters.

Punjab States.

183. The evidence from the Punjab States supplies nothing new regarding the cultivation. From Bahawalpur there is corroboration of Mr. Dames's statement that in the processes preceding the sowing of the seed the land is watered.

Central Provinces.

184. The cultivation of the Khandwa tahsil has been described by the Deputy Commissioner of Khandwa and the Excise Commissioner. These papers, with the Commission's notes, furnish materials for the following account.

The regular cultivation.

185. The average rainfall of the tract in which ganja is cultivated is 33 inches. The soils which are considered most suitable to the crop are—

Pandhar, or white soil—land near the village site which is largely mixed with ashes and sweepings from the village;

Mand—a light yellow alluvium pervious to moisture;

Kali—black soil or regur.

The first two are the best; the last is too stiff if the season happens to be very wet. The seed is specially cultivated in fields apart from the ganja, and in this the practice differs from that of Bengal, where the seeds which fall from the ganja in the process of preparation are kept for sowing. The seed of Dhakalgaon, a village in Indore territory, is considered the best, and fetches double the price of other seed. It gives a stouter and more branching plant than the local seed. The same fields are used year after year for hemp cultivation, and it is thought sufficient to manure heavily once in three years. Here again the practice differs essentially from that of Bengal, where the land will only grow hemp every three years, and heavy manuring is required each time it is sown. The manure used in Khandwa consists of household refuse, cow-dung, and ashes, and is given to the land at the rate of sixteen to twenty cartloads per acre. The crop is sown about fifteen days after the first good fall of the south-west monsoon, *i.e.*, in June or July. If the field is not under any crop, it is ploughed in January or February, and in any circumstances it is thoroughly worked up in April or May. The latter is the season for manuring if it is the turn of the field to be manured, and two ploughings and two applications of the *bakhar*—an instrument which serves the purpose of a harrow—are considered necessary between this time and the sowing. The seed is sown on a sunny day by means of a bamboo drill (*sarta*), which is used in combination with the *bakhar*. The seed germinates within a week, and in twenty days the plants have reached the height of about nine inches. The spaces between the furrows are then cleaned with the bullock hoe (*kolpa*), and between the plants in each row with the gardening hand-implement called *khurpi*, the plants being thinned out at the same time, so that they shall stand six or nine inches apart. The weeding process goes on for a month, and during it the lower leaves of the plants are removed. There is no transplantation at any time.

The detection and removal of male plants.

186. About six weeks after sowing the examination (*parakhai*) for eradication of male plants begins. The first plant to be detected and uprooted is the pure male called *naria* or *bhangra*. The cultivators recognise a variety of the male plant which they call *sheoria*, and this is treated like the *naria*. The male plant, either *bhangra* or *sheoria*, occasionally bears some female flowers, and is then called *adnaria*, with the addition of *bhangra* or *sheoria* according as it is supposed to belong to either variety. *Naria* of course means *male*, and *adnaria* *half-male*. It is to be noted that no mistake is made about the true sexes of the plant by the cultivators of Khandwa. So clearly do they understand the distinction that when asked the reason for removing the male plants, a cultivator replied by asking what would happen if a ram were let loose amongst a flock of ewes. The cultivators themselves undertake this eradication, and no specialist is required. But it is not done very perfectly, for when the Commission visited a ganja field on the 9th September male plants in full blossom were discovered without much difficulty. In September or October the field begins to be irrigated. It will be noted that the south-west monsoon has now nearly ceased, and that rain is henceforward harmful, as it washes off or otherwise dissipates the resin which has begun to accumulate in the female flower spikes. The crop ripens about the middle of November, maturity being indicated by a brownish appearance in the flower spikes.

187. The Commission inspected some fields in this month, and found that those in which the crop was pure ganja contained a number of plants which the cultivators called by the name of *moria*. These had generally at the ends of the branchlets composing the spikes one or two male blossoms. They are said to be deficient, though not wanting in resin. They are therefore regarded as inferior, but the Khandwa cultivator does not appear to recognise the mischief that they do in the ganja crop. He, however, attributes to them a specially noxious character in that their seed invariably produces plants of the same kind (*moria*). They are therefore ruthlessly eliminated from the seed field, while they are sometimes allowed to remain, as was seen, in the ganja field, and are in that case harvested with the good ganja (*mal*). These appear to be the plants referred to by Dr. Prain as those which "the *poddar* could not possibly have foretold," and which the Bengal cultivator roots out for himself after the *poddar's* visits have ceased. They do not appear to be, as Mr. Drake-Brockman supposes, the *k hasia* plant of Bengal, but it is possible that the latter is included in them. The khasia form of the plant is not recognised by the Khandwa cultivator.

The female plant with abnormal male blossoms.

188. The processes in cultivating the seed plant seem to be the same as those above described as regards preference of soil, manuring, and tilth. It may be mentioned, however, that irrigation is not invariably practised for either ganja or seed crops. In the case of the seed crop, plants bearing flowers of both sexes are as far as possible eliminated. The process is rational. The blameless female is the more likely to reproduce her own kind. The evidence gives no information of peculiar methods followed in the homestead cultivation. There is no special class of cultivators.

The seed crop.

189. There is no information of the methods of cultivation, if any still exists, in the Tributary States.

Tributary States.

190. Mr. Benson's bulletin describes in detail the methods of cultivation in the two regions where alone ganja is supposed to be regularly cultivated in the Madras Presidency. The methods differ, and it is necessary to deal with them separately.

Madras.

191. In the Javadi Hills of the North Arcot district the cultivation is carried on by the Malayalis. These people "claim to alone possess the knowledge necessary for the manufacture of ganja, a practice which has been carried on, they state, in these hills from time immemorial." There being no considerable level areas, though the ground is to a certain extent terraced, the crop is sown in small plots. "The soil is free, friable, and open, derived directly from the rocks on which it rests, thoroughly well drained, and appears to be fairly fertile." It grows the ordinary dry food-grains of the country, and the hemp alternates with them. A heavy dressing of cattle dung is absolutely necessary, and this is given in May or June before the rains begin. When the ground has been sufficiently moistened to allow of ploughing, it is broken up, and the ploughing is repeated three or four times until July. The seed is then sown in furrows, opened with the plough three feet apart, and covered in with the feet. The seeds germinate in about a week, and are allowed to grow for three weeks, when they are thinned out. In

Regular cultivation in North Arcot.

the meantime the field is kept clean by ploughing between the rows and weeding. When about a foot high, the plants are earthed up by means of the plough. When the crop is four months old, the males—called female by these raiyats—are eradicated. This process goes on continuously as the males betray their presence, but is never quite successful, as a certain amount of seed always sets. The harvest begins in January and continues up to March, ripeness being indicated by leaves and flower heads turning yellow and the former beginning to drop. The crop is never cut on a damp or cloudy day.

Regular cultivation in the Kistna district.

192. The other tract of cultivation is in the Kistna district; the only village which has any considerable area is Daggupad, near the borders of Nellore, and about fifteen miles from the sea. It is a wide open plain, the soil being a stiff black loam with a considerable admixture of *kankar*. The lands devoted to hemp are sometimes near the village, sometimes at a distance, but always reasonably accessible. The crop is sometimes cultivated and handled by the raiyat himself, but more frequently he supplies only the cattle labour, and the rest is done by others, chiefly Muhammadans, of whom there are many in the village. The crop usually follows millets, dry rice, coriander, tobacco, indigo, or chillies, but sometimes hemp is grown in successive years. In the last case heavy manuring is necessary. This is supplied by folding sheep upon the field or carrying cattle manure to it. The land is ploughed about three times between July and October, and finally worked with a three-tined grubber (*gorra*, or seed drill used without its seed hopper and tubes). It is then marked off in two feet squares with a marker similar to the *gantaka*, or scuttle worked without its share. At the angles of the squares four or five plants are dibbled in with a stick, and watered to set them.

The nursery.

193. The seed-bed is usually made on the dam of a tank, and is about six feet wide by sixty feet long. It is dug up with a crowbar, reduced to a fine tilth, and levelled. In August the seed is scattered upon it and covered up by hand, and the bed is hand-watered as often as necessary for the next two months. When the plants are two feet high they are topped off, and in a few days they put out numerous side branches, and are then transplanted into the field. This takes place in October. A month after planting the fields are hand-weeded, and about a fortnight later a plough is run between the rows, and the plants are thereby slightly earthed up. Flowering begins two months after planting out, and the male plants are removed. Here, as in Bengal, the male plants are called female. These plants are cut down at the root and thrown away, and the process goes on as long as male plants are detected. The harvesting begins in February and goes on into March. Nothing is said of the employment of professional *parakhdars* in either tract. And in neither does irrigation appear to be practised beyond the extent above-mentioned in the Kistna cultivation.

Irregular and homestead cultivation.

194. The evidence, as far as it relates to the regular cultivation of the tracts described above, does not add anything to this information. But details more or less interesting and some curious are furnished regarding the stray cultivation. Mr. Morgan, Deputy Conservator of Forests, says of the surreptitious cultivation in forests that the seed is scattered in old cattle kraals, and the plants thinned out to enable them to branch, the males being extirpated. A Cuddapah witness (121) states that the plants are moved from a seed-bed and planted out over the fields,

after which they are carefully tended, the big leaves being removed, the trunks twisted, and the plants themselves manured. Another witness from the same district (57) mentions watering and the extirpation of the males. And yet another (134) alleges that the best sorts of ganja are produced by planting the seed or seedling—it is not clear which—in the mouth of a dead dog which has been buried in a suitable position, and by splitting the stem and binding up opium or arsenic in the cleft. The practices of splitting the stem and inserting a potsherd and of twisting the stems are mentioned by so many witnesses that there can be little doubt they are more or less in vogue. The statement that opium is inserted in the stem is also not uncommon; but the rare evidence that arsenic and assafœtida are so used must be classed with that relating to the dead dog, to the use as manure of fowls' and pigeons' dung, of serpents' heads, of debris of dead snakes, of *Ptychotis fructus*, and of water made dirty by washing fish, and the getting plants poisoned by cobras. These aids to cultivation are some of them not generally known and others not easily procurable, and do not deserve much attention. The point to be noted is that even in the desultory cultivation of the garden, the homestead, and the field, the practice of isolating the female plant is not uncommon, and results in the production of the stronger and more valuable form of the narcotic, *viz.*, ganja. The evidence seems to show beyond doubt that the knowledge of this process is very widespread, extending over the whole Presidency from the hill tracts of Ganjam to the Wynaad. It may also be mentioned as affording facility for cultivation that in the climate of the Madras Presidency the plant requires but little artificial watering. When it has once taken root, the rainfall suffices for it ordinarily. The homestead cultivation is not carried on by any special class except in so far as religious devotees, Hindu and Muhammadan, very commonly engage in it, and it may be said that the cultivators are frequently consumers of the drugs.

Madras States.

195. There is no information about the mode of cultivation in the Madras States, except that from Travancore, regarding the stray (and clandestine) cultivation by the Kanikars or hillmen, mendicants and Musalmans. It is said that the seed either of the imported ganja or of locally grown plants is sown thickly in loose soil. The seedlings are in due time planted out six feet apart. "The *chada* ganja grows denser and shorter than the other variety," presumably the male. "It thrives best in rich loam or alluvial soil. It requires no special manure, but it is believed that the decomposed bodies of snakes, particularly of serpents, is the most efficacious manure. Some even go the length of thinking that there is a special advantage in dropping the seeds into the mouths of serpents killed and planting the thing whole. Excessive rain, it appears, is injurious to ganja. The plant flowers in about ten months from date of planting." The hillmen are those who engage in this cultivation most, but it does not seem to be common. The processes already described for the Presidency in the desultory cultivation are doubtless those employed for similar cultivation in the other States.

Bombay.

Soil preferred, and season of sowing.

196. The cultivation, it has been seen, is almost wholly confined to the Central Division of the Bombay Presidency, and a few small Native States in the Deccan and Southern Maratha Country. The method of cultivation in this region has been described by many witnesses, and it proceeds on one system through-

out. There is some discrepancy as to the nature of the soil which is most favourable to the crop. The preponderance of evidence is in favour of the lighter mixed soils, and not of the richest and heaviest black soil. Mr. Ebden, Collector of Ahmednagar, gives the following description of it: "When grown for ganja the plant requires a rich friable soil, and land near a village site is often selected on account of the manure with which native habits supply it. Irrigation being necessary in case of insufficient rain, *bagait* land is preferred. When the plant is grown for seed or for the manufacture of bhang only irrigation is not essential, and in ordinary seasons any good *jirait* land will do." It is principally in Satara that the richest lands are said to be preferred, but in the ganja-growing tract of that district they are probably not the adhesive clay which is the consistency of the best black soils in the Deccan. Rotation is necessary; good crops of hemp cannot be got off the same land in successive years. The field is thoroughly worked up for some month or two before the south-west monsoon, and is heavily manured, sometimes by folding sheep upon it. In Khandesh the seed is sown in the very commencement of the rainy season, *i.e.*, early in June, the *munga nakshatra*. Further south it is put in later, *viz.*, in the *Punarvasa* and *Pushya nakshatras*, which correspond with July-August. The seed generally preferred is that from Ahmednagar.

Sowing and treatment of the crop.

197. The agricultural processes are the same everywhere. The seed is sown with a single drill, the other pipes of the ordinary triple drill being closed if that implement is used. The lines are from one-and-a-half to two feet apart. The seed springs up within a week, and the plants are allowed to grow till they are about one foot high, the field being kept scrupulously clean meanwhile by the cattle hoe and hand weeding. The rows are now thinned out where they are too crowded, and the lower branches are removed to force up the growth of the tops of the plants. The weeding with the cattle hoe earths up the rows in some degree. In about six weeks from the sowing the plants have reached a height of two feet. The *parakhai* or *parakadar* is then called in. Witness (47), Superintendent, Office of Survey Commissioner, and Director of Land Record and Agriculture, says that the ganja cultivators of the Poona district are skilled in distinguishing the male plants. Everywhere else the *parakhai*, or examination for male plant, is done by an expert, who is paid at the rate of Rs. 8 to Rs. 10, or even more, a month. The plants are at the same time thinned out where necessary to allow of lateral growth. The witness just quoted also states that the female plants are bruised by giving them a half twist a few inches above the root to induce this lateral growth. This process is not described by any other witness. Mr. Ebden, however, furnishes the interesting information that it is part of the *parakhai's* business to search the country round if he finds symptoms of mischief caused by "pernicious plants." He also says that in the seed field the *parakhai* is not required. But this may be doubted, for Mr. Kennedy (54), Superintendent of Police, has learnt that the female (*sic*) plant is eliminated from the seed field, from which it would appear that some extermination of plants is practised here also. Probably attention is directed, as in the seed field of Khandwa, to the eradication of the bi-sexual plants of all kinds.

Male and female plants and their different forms.

198. The educated witnesses who have supplied the information before the Commission understand clearly enough the broad distinction between the male and female plants and their

functions, but the cultivators seem to be very hazy on the subject (Mr. Ebden). In spite of the fact that one or two of the names applied to the various undesirable plants which the *parakhai* casts out show a correct understanding of the reason why they are mischievous, these names without distinction are given by two witnesses as names of diseases, and it is probable that the plants indicated are popularly regarded as diseased plants. Yet it is difficult to believe that there should be so wide a gulf between this ignorance and the intelligence found in the Central Provinces among people of the same race and occupation, and not separated from the Bombay cultivators by any great distance as distances go in India. The forms of the plant, noxious from the point of view of the ganja grower, which have received special names, are given below, with the explanations of the witnesses regarding them in brief. These explanations are evidently gathered from informants, and are not based on the witnesses' own observations, except in the case of Mr. Ebden.

Andya (*36*), *Andia* (*30*).—Indicated by the "pin-like white flowers" (36); by organic molecules formed in the top of the plants; affects plants in the beginning of their growth, and lasts about a month (30).

Remark.—Apparently the simple male.

Bhangira (*48*), *Dhatura* (*5*).—Plant examined by Mr. Ebden, who says: "Latter name identical with that of the common poisonous plant," and pronounced male.

Remark.—The simple male.

Shevarya (*36*), *Sheora* (*30*), *Shewara* (*5*).—One of the branches grows higher, and bends down with a flower like jawari grain at the end of it (36). White flowers grow on the flower top (30). Mr. Ebden has not seen specimen.

Remark.—A form of the male plant known by the same name at Khandwa.

Haldya (*36*), *Haldia* (*30*).—Recognised by a yellow shoot at one of the knots of the plant (36). Affects the plant by producing a yellow colour in the tops, and lasts till the full growth of the plant (30).

Remark.—The yellow colour may be caused by deposit of pollen.

Kapshia (*36*), *Kapsha* (*30*).—Recognised by a jawari like grain which gets transformed into a white or yellow flower (36). Whitens the plant (30).

Remark.—Witness (36) describes a male blossom; witness (30) some sort of disease or the deposit of pollen.

Bundia (*36*), *Bunda* (*30*).—Same description as that of *Kapsha* (36). The seed is formed in the flower head, which afterwards produces flower (30).

Remark.—A bi-sexual form probably.

Mora (*36*), (*30*), *Morai* (*5*).—Recognised by the yellow flower on the top branch, which makes its appearance sometimes fifteen days before reaping of the crop, and has the effect of destroying the better quality of the ganja (36). Appears late, and causes breach (*sic*) of the flower spike (30). Female partly gone to seed; is not exterminated; is regarded with regret, its meaning being that the male has somehow got access and partly spoiled the crop. Examined (5).

Remark.—Probably the same as the *moria* of Khandwa, and the female with abnormal male blossom of Dr. Prain.

Charkha (30).—Makes the flower yellow, and lasts to the end (30).

Remark.—Much the same as *Kapsha.*

Aradnar (30), *Ardhanar* (5).—From the stock to the top of the plants small buds are formed which give rise to white flowers (30). Not examined; but must be, as its name implies, the bi-sexual plant (5).

Remark.—The same name, *adnaria*, is used in Khandwa for the ordinary male plant with some female blossoms.

Tik (5).—Examined and pronounced bi-sexual; the *ardhanar*, which Mr. Ebden did not examine, was probably the same (5).

Remark.—Sounds like a short name for the rather clumsy one which goes before.

Ropda (5).—Mentioned, but not seen by Mr. Ebden.

The fact that the plant in its sexual arrangements takes so many forms will probably be interesting to scientific readers, and the complete list is therefore given. And it is supplemented with such remarks as the information gathered in the course of the Commission's inquiry seems to justify. The Commission do not claim to have made any exact study of the subject, and have not even had an opportunity of personally examining the plant and its cultivation in the Bombay Presidency. As far as the cultivation is concerned, the enumeration of these forms of the plant is of interest as illustrating the fact that the extermination of the male requires considerable practical skill, and that the existence of the *moria* form, which develops its male blossoms with such delay and caution, is a special difficulty in the way of the complete seclusion of the female, and the production of the finest form of the drug.

The crop matures in about five months, and is therefore gathered in November or December in different localities according to the date of sowing. In Bijapur the cultivation is carried on by the ganja farmer, and the *parakhai* seems to supervise it up to harvest; and it would appear that elsewhere his services are required for a longer period than they are in Bengal, and that he exercises a wider control over the cultivation generally. As a rule irrigation is only resorted to if the rainfall is insufficient or untimely; but the crop is nearly always raised under the protection of a well. After the flower spikes are formed on the ganja plants rain does damage. The crop does not ripen till a month or two after the south-west monsoon has ceased, and during this period irrigation must often be required. Witness (27) describes what must be the simple garden cultivation, which, if it exists at all at the present day, is quite unimportant in this Presidency. The evidence shows a striking unanimity on the point that the heavy rainfall of the belt lying immediately to the east of the crest of the Western Ghâts renders that part of the country unsuitable for the cultivation of hemp. There is a strong body of evidence that rich but light soil and only a moderate amount of rain are required. This has an important bearing on the subject of the spontaneous growth.

199. About the cultivation in Gujarat the information is that loamy or sandy soils are suitable, and that black soil is not; that the crop takes six or seven months to mature; that it can be raised either as a monsoon crop or as a cold-weather crop; that the former yields the stronger narcotic; that the males are extirpated; and that irrigation is not required. There is no information about the employment of the *parakhai*, and it is probable that in this cultivation for bhang the moderate skill possessed by the cultivators themselves answers all purposes. Both in the Deccan and Gujarat the cultivators are of the ordinary class; the industry is not confined to any caste or grade among them. The cultivators in Ahmednagar are sometimes Brahmins.

Cultivation in Gujarat.

200. The description of the cultivation given above applies to the Southern Maratha Country Agency and all the States in the Southern and Central Divisions where they have any cultivation at all. The following agencies have not any regular cultivation: Kathiawar, Cutch, Palanpur, Mahi Kantha, and Rewa Kantha. Such cultivation as there is consists in the rearing of a few plants which have often sprung up by accident by water-courses in gardens and in fields, generally irrigated fields, such as those where sugarcane is grown. There is no information as to whether the male plants are eradicated, or of any peculiar methods employed in the cultivation. The cultivators are either consumers, often fakirs and bairagis, or, if not, ordinary husbandmen who nurse a few plants to provide themselves with an article that will be an acceptable present to such people. The drugs appear to be very rarely sold.

Bombay States.

Aden.

201. There is no cultivation of any kind in Aden.

202. There appear to be two methods of cultivation in Sind, as stated by witness (5)—one by well irrigation, and the other by artificial inundation or flooding. In the latter case it would seem that the preliminary flooding has to suffice for the whole growth of the crop. The best descriptions are given by witnesses (2) and (14).

Sind.

203. In cultivation by well the area is generally smaller than in the other process (2). This would be expected, for the former involves a greater amount of labour in the preparation of the land, systematic sowing in ridges, and periodical watering. Mr. Giles' account apparently describes the cultivation under wells, which he states to be the more general. High tilth and manuring are required, goats' dung being the manure preferred. The seed is sown even as late as the beginning of January. It is put in by pinches of five or six seeds at a time on ridges. The crop is gathered in April and May. The male plants are rooted up and thrown away as useless. When the crop is ripening, some of the flower-heads are cut off and preserved separately. These are called *ghundyun*, and are said to be more intoxicating than the rest of the plants. Small pieces of *ghundyun*, which fall off apparently in the drying of the rest of the crop, are called *dodo* or *dodi*, and are preserved with the *ghundyun*. Witness (14), in describing cultivation by periodical irrigation and not mere flooding, states that the seed is sown broadcast; that after a preliminary soaking the ground has to be worked up, the seed sown, and the ground again turned over and levelled in one day. Manuring, says this

The regular cultivation.

witness, is generally deferred till the plants have made some growth for fear of a noxious worm which attacks the young plants. When the seedlings have appeared two or three inches above ground, weeding begins, and the plants are thinned out. When the plants are a foot high, they are dressed with manure, and this may be done more than once during the period of growth. When the crop reaches the height of about five feet, the male plants, which are distinguishable by their small pale-green flowers, are weeded out. The reasons assigned for this practice are that the female may have more room to grow, and that the male plant is held to cause giddiness when used.

Male plant extirpated.

204. This witness says nothing about the separate collection of certain of the flower spikes, but witness (26) does: "The big *ghundis* are separated and kept apart to be used as ganja." It may be that this account refers to selection made at the time of manufacture, and not to such a selection from the still standing crop as Mr. Giles seems to indicate. Broadcast sowing appears to be the more common practice, except where a few plants are grown for private consumption. In that case the sides of water-courses appear to be a favourite situation for the plant. The evidence does not show that the people understand the effect of removing the males in increasing the secretion of resin in the female flower spikes. It would seem that the produce of the female plant is preferred for consumption, and that the male is removed because it interferes with the growth of the superior plant. It is in fact treated as a weed. It cannot, however, be doubted that the practice of eradicating it is general. Witness (10) mentions some curious practices intended to enhance the narcotic quality of the drugs, the like of which have been described elsewhere. Some people, says this witness, make an incision in the stem of the bhang plant and put opium into it, sometimes a dead snake is buried under the plant, or it is watered with dhatura-water or huka-water.

Hindus probably preponderate among the cultivators.

205. Hindus appear to be the chief growers of bhang, while the majority of ordinary cultivators are Muhammadans. Mr. Giles writes that "the actual sowing of the seed, the ploughing, weeding, and bird scaring, etc., is always carried out by Bania or Hindu cultivators, the Muhammadan cultivator supplying the bullocks which work the well and the zamindar giving the land. The Bania supplies the seed, but the manure is given in the same proportion as the produce is divided, *i.e.*, one-fifth to the Bania and two-fifths each to the raiyat and the landholder. The landholder also gives takavi or advance in cash to the raiyat." This seems to describe a partnership of a kind which probably exists in the cultivation of other produce in the same country; but there is other evidence to show that the Hindus preponderate in growing this particular crop. The habit or custom is not, however, sufficiently well marked to be regarded as a special feature of the industry.

Khairpur.

206. The cultivation in Khairpur is not likely to differ from that of the rest of Sind. There is no detailed information about it.

Berar.

207. In Berar, as elsewhere, the *pandhri* or white land near villages is preferred; black soil is too stiff, and has to be made lighter with heavy manuring. The crop is grown in the

south-west monsoon, sown in June, and gathered in November. It must be protected by a well in case of failure of timely rain. The official report says: "If the rains fall favourably, no irrigation is required till about October, when the plants are maturing, when apparently they always require to be watered." The cultivation of Berar does not differ materially from that of Khandwa, whence the seed seems to be imported. There is one curious practice which the Commission have not heard of elsewhere. The seed which is sown with the drill is a mixture of *Cannabis* and *Hibiscus cannabinus*. When the seedlings are a fortnight old, the *Hibiscus* plants are weeded out. One witness explains this practice as being due to the fact that hemp seed will not germinate by itself. The official explanation, which is probably correct, is that the hemp seed is by this means economised, the necessary space between the plants being secured at the expense of *Hibiscus* seed. The male plants (*bhangra*) are picked out after the crop has reached one-and-a-half feet in height. One witness (9) states that the *malis* who carry on the cultivation are able to distinguish the sexes, and one other (7) that the services of experts are required. The others are silent on the point. Witness (14) mentions the practice of opening the lower part of the stem, inserting opium, and binding the part up very tightly to increase the narcotic quality of the drug. The same witness moves on the date of sowing to the *Punarvasu* and *Pusha nakshatras*, July-August, which is the sowing time in the Bombay Deccan. Witness (11) states that under native rule the plant was cultivated by consumers in the yards of houses. It was watered, and when it had grown sufficiently to allow the sex to be discovered, the ganja smokers uprooted and threw away male plants. There is no particular class of cultivators, unless it be that the *malis* preponderate among them for the reason that their vocation is cultivation by means of well irrigation.

Ajmere.

208. In Ajmere there is but a small amount of desultory cultivation by the Brahmins of Pushkar, malis, and sadhus. The plant may be occasionally tended with some care when it is grown in the garden of a mali or near the hut of a sadhu; but there is some evidence that it is generally allowed to take care of itself. Mr. White King's report of 1886 says: "Even in Pushkar, however, it is grown only in small quantities on the edges of fields and along the banks of water-channels," and this seems to be the most considerable cultivation in the province. This report does not indicate any great care in the cultivation. The produce, according to the same report, is merely bhang. The evidence does not furnish any details whatever of the method of cultivation.

Coorg.

209. In Coorg the methods of desultory homestead cultivation may be employed by some low class coolies. A witness talks of the seeds being "sown broadcast in rich soil mixed with burnt clay, and afterwards transplanted in good rich soil;" but it is not clear that this method is in vogue in Coorg. Some Madras witnesses gave information of the same kind.

Baluchistan.

210. There is no information from Baluchistan.

Burma.

211. Mr. Bridges (3) and the ex-Sawbwa of Nyaungwe State (50) are the only witnesses who give any details of the cultivation in Burma. The Shans and the Danu people appear to rear the plant for the drug in their homestead land; the Kachins, Palaungs,

and Lawas to cultivate for fibre in fields. Mr. Bridges is informed that in the former cultivation the male plant is exterminated. The ex-Sawbwa does not know of this practice. But he says that the stem of the plant is split when about the thickness of the finger and a month before maturity, and a piece of wood inserted. A light earthen chatty, or more often a basket, is placed over the flower-head, and allowed to rest upon it, to prevent the plant growing and make the head grow thick. In order to do this, the flower-bearing branches are gathered together and thrust into the vessel, which has a mouth of about a foot in diameter. This is the regular practice in cultivation for drugs. The chatty or basket is kept on the plant for about a month. These processes are not unknown in India. The splitting of the stem is frequently mentioned, but the use of the chatty in only two provinces. No account of the Kachin cultivation has been furnished.

Mysore.

212. A peculiar method of cultivation is described by the Special Assistant Excise Commissioner and the Excise Assistant Supervisor, Tumkur district: "The seeds are sown in a nursery at the beginning of the south-west monsoon. A month after sowing the seedlings are transplanted into pits, each one foot deep, and dug at intervals of three feet, and well manured. The young plants are watered daily for a month or so. The stem of the plant is twisted just above the ground, and the plant itself is bent horizontally to the level of the earth in order to induce the growth of side branches and prevent the vertical growth of the plants like a stick. Just after the appearance of blossoms on the female plants, male plants are destroyed, etc." Such is the latter officer's description. The last sentence is rather faulty, for the extermination of the male plant after the female was ready to receive its attentions would not be of much use. Mr. McDonnell describes a very similar, but even more remarkable, method, to judge by its results in the size of the plant: "When specially cultivated, a circular pit two or three feet in diameter and a foot or so deep is excavated, and well manured with cow-dung and ashes. The plants are made to form a circle round the edge of the pit, and the centre is heaped up with manure as required. The stems rise five to seven and often twelve feet high, *each as thick as a man's wrist*, and are supported by staves secured with ligatures from the aloe leaf. In other cases single plants are raised in each pit. *The stem is then the thickness of a man's arm*, five feet high, and as much in diameter. The stem is taken in both hands, and twisted at the root just above the surface of the ground to stunt the growth.....The male plant is profitless, and is uprooted and thrown away." It is by no means clear to what extent these methods are actually practised, and, for the practical purpose of producing ganja, the important operation of early eliminating the male plant has hardly sufficient prominence in their description. There appears to be a spice of imagination about them—an element in which the subject of cultivation as well as much else connected with the hemp plant is by no means wanting.

Hyderabad.

213. A fairly full description of the method of cultivation is given by the Director of Agriculture and Commerce of the Hyderabad State. The greater portion of the cultivation appears to lie in the north-west corner of the State bordering on the Bombay districts of Sholapur, Ahmednagar, Nasik, and Khandesh. The description does not show any important departure from the methods of the British districts. It may be noted, however, that "fresh seed every year from some

distant village is unavoidably necessary." The names of "male and unhealthy kind of plant" which must be weeded out are—

In Telugu country—	*In Aurungabad—*
Kotmir.	Mathisar.
Kokapoti (dog's tooth).	Ardnar.
Yongpota.	Morga.
Bougra.	Bhagira.

The last three Aurungabad names can probably be identified with the similar names used in Satara and Ahmednagar. It is stated that the extirpation of these plants is a heavy item in the labour bill. The Director mentions having seen ganja plants grown by a fakir in the compound of his hut in Warangal, which is in the eastern part of the territory, about seven to eight feet high, and each plant twelve to sixteen feet in circumference, the stem near the root eleven inches round. These were a few plants only. The cultivation is not confined to any particular class. The witnesses, however, lay stress on the fact that it requires special knowledge and skill, which are possessed by very few.

Rajputana.

214. If there is any regular field cultivation in Rajputana in areas set apart for the crop exclusively, it is not very important, and the papers furnish no information of the methods employed in it. Some details are supplied of the desultory garden cultivation. It is carried on by those who possess gardens, who are generally *malis*, but may be *Kumbhars*, *Kachis*, *Ghanchis*, *Sivris*, or of any other caste. Bhang is rarely, if ever, grown as the principal crop. It is sown in the beds with poppy, tobacco, onion, or other vegetables in the month of January or February. Sometimes it is sown round these beds, which may contain in place of the crops mentioned above coriander, mustard, or *rijka* grass. It is gathered in June. It does not appear to receive any special care. Its growth is to a great extent haphazard, and often springs from accidental sowings. The practice of removing the male plant is not found in any State. In some places the saline character of the soil and the scantiness of water forbid the cultivation. The Commission have been informed that experiments to grow the plant in Erinpura failed.

Central India.

215. Mr. Gunion's memorandum contains a description of the methods of cultivation for ganja and seed in the Indore and Dewas States. The same field is cultivated for bhang and seeds in Indore, but in the Dewas State the male plant is removed from the bhang field. They do not materially differ from that of the Nimar district in the Central Provinces, and it may be doubted if the elimination of males in the Dewas bhang cultivation is a correct description of the selection which is made. It may be noted, however, that the Indore cultivator, unlike the Khandwa cultivator, does not trust himself to buy the seed or exterminate the male plant. Experts are employed for these purposes. In Mr. Gunion's account mention is made of "inferior and unhealthy plants" to be exterminated apart from the removal of males, and it would appear from this that the cultivator, or it may be the Indore reporter, had not such clear ideas of the various sexual forms of the plant as the Nimar cultivator was found to possess. In the Indore cultivation gaps caused by faulty sowings or failure of seed to germinate are filled up with

new seed. The soil on which the plant is grown in Dewas is described as "dry, stony, elevated loam." In these States the cultivation is not carried on by any particular class, but it would appear that in Rewah the *Kachis* alone undertake the industry.

The Political Agent of Bhopawar gives the following description of the desultory kind of cultivation employed in that part of Central India: "Hemp seed is sown in poppy or maize fields. When the plant is above two-and-a-half feet high, the main stem is split near the root and a piece of tile thrust in. This prevents the plant from setting seed freely and makes the tops fit for ganja. When particularly strong ganja is required, each hemp plant is watered once with half a tola of opium dissolved in water. The cultivators believe that by transplanting the young plant into the mouth of a dead venomous snake (cobra preferred) the ganja becomes unusually strong." The Commission have heard of the extirpation of male plants in the cultivation of the Gwalior State, and the same information is furnished by Mr. Gopal Ram in the appendix to the North-Western Provinces memorandum. The latter authority also mentions that the crop is irrigated, and that "some cultivators sow wheat in the ganja fields in the months of October and November." The cultivation covers the season from July to December.

Baroda.

216. No details are furnished in the State report, but the cultivation is of very small extent, and it may be confidently assumed that its methods are the same as those of the Gujarat Division of Bombay, with which the greater part of the Baroda territory is intermingled.

Kashmir.

217. The State report would show that there is no cultivation in Kashmir. Dr. Royle's "Fibrous Plants of India" and the references to the hemp plant in "Punjab Products" have been consulted without finding any definite statement to contradict this information. In the latter work both the bhang and "fibre" sent from Kashmir and Ladakh to the Punjab Exhibition are mentioned, but they may very well have been the produce of the wild growth. Dr. Watt refers in his "Hemp or *Cannabis sativa*" to cultivation of the plant in Kashmir, but without mentioning his authority. Dr. Royle's abstract of information at page 327 states: "All along the Himalayas, that is, in Nepal, in Kumaon, in Garhwal, and up to the newly acquired hills of the Punjab, at elevations of from 3,000 and 4,000 to 7,000 feet hemp is cultivated by the hillmen." Beyond this point westward his information does not go. There is a curious statement by the Governor of Kashmir that "almost all wild hemp, whch is called *talia* in the Punjab, and is generally female plants in the above-mentioned tahsils, is used for the preparation of ganja locally known by name *gard* bhang (*chura* charas)." The meaning is not clear; but the preponderance of the female plants, if it is the fact, indicates either some peculiarity in the environment of the plant in these regions or tending by man.

Nepal.

Mr. Hodgson—Page 323 of Dr. Royle's "Fibrous Plants of India."

218. The answers to the Commission's questions furnished by the Nepal Darbar would lead to the belief that cultivation is very uncommon, and only carried on in a desultory way by consumers of the narcotics. But in Dr. Royle's "Fibrous Plants of India" will be found at page

323 a description by Mr. Hodgson of the cultivation for fibre. He states that the cultivation is peculiar to the northern districts of Nepal. These districts, "popularly called Cachar, are nevertheless the prime seats of culture, and there alone is the plant manufactured into rope or cloth, though the edible extracts are sometimes prepared nearer to and around Katmandu." Regular cultivation for fibre is therefore confined to the northern districts. The season of sowing is from March to April. The season is earlier, but the course of cultivation is much the same as in Kumaon. Mr. Hodgson states that "damp soils, comprising black earth, are fittest for this crop." This description does not agree with other information on the subject. The plants flower and fruit in July, and are in their full growth at the beginning of August. While yet succulent and in flower they are cut, with the exception of some seed plants, which are not to be reaped till October. It is the bark of the young but full grown July plants which is soft that is used for making cloth. That of the old or October plants is hard and not suitable for manufacture. Mr. Hodgson says nothing in the extract made by Dr. Royle, if there is anything to be said, of the processes adopted for developing the narcotic in the growing plant. The fibre cultivator of Kumaon does not apparently do anything with this special object, and yet his female plant yields charas. It is probable that the early removal of the males may have the tendency in both places.

Information furnished by the Darbar.

219. The Darbar answers say nothing about the fibre cultivation, but they contain some information regarding the scattered cultivation for narcotics. The following morsels may be quoted: "When the plants put forth fine down, the tip of the plants is cut off, and the big leaves are plucked off, and the plant is shaken from time to time so that the down may fall off. This causes a large number of branches and fine leaves to be produced, and the latter, getting twisted and stuck together, are called in Nepalese *lata*." "The plant which produces much seed is no good; that which produces little seed is good." "Some persons in the hills plant a few trees which are to be had growing wild." "By slitting the stem of the plant and inserting a piece of opium or clove or *bhiroza* wood and tying up the part with a string the ganja becomes somewhat more intoxicating. This is done by those who know about it, and is not the work of any particular class." "The male plant of the ganja is solid; the female one is hollow. The male plant is more intoxicating than the female. When the plant has attained a height of two or two-and-a-half feet, it is slightly slit, and ascertained whether it is a male or female."

From these extracts it may be gathered that the wild seedlings are transported and planted in suitable places, and that every endeavour is then made to encourage the secretion of the resin in the female (called male) plants. Probably the cultivators know the effect of exterminating the male plant, and follow the practice, though this is not expressly stated.

CHAPTER VI.

PREPARATION OF THE RAW DRUGS FROM THE CULTIVATED AND WILD PLANT.

Bengal.

220. The preparation of the finest sort of ganja is a somewhat laborious process, and requires skill and knowledge. For a full description of the preparation of flat, round, and chur ganja in the Ganja Mahal, the reader is referred to Babu Hem Chunder Kerr's report. Dr. Prain has given a shorter account of it. It must be remembered that the terms 'flat,' 'round,' and 'chur' are peculiar to the Bengal manufacture and excise system. Their exact meaning is rarely understood outside the province. The more important details of the processes may be briefly noticed.

Bright sunny weather is essential to the best manufacture. The crop does not all come to maturity at the same time, and the plants must be manipulated within three or four days of maturity, or they become useless. These conditions have to be borne in mind in arranging for the manufacture, and it would seem that the plants have sometimes to be gathered before they are full ripe. The plants are cut in batches, as many as can be handled, by the available labour and means in three days. The *Khasia* plants are left standing, or, if gathered by mistake, are rejected in selecting the portions of the plant to be worked up.

The manufacture of flat ganja.

221. The manufacture of flat ganja takes three days, and is carried out on a piece of ground near the field which has been specially levelled for the purpose, and is called the *chator* or *khola*. The number of plants handled in each three-days' operations is usually about fifty or sixty. The first day the plants are cut in the morning, brought to the manufacturing ground, and spread out in the sun till the afternoon. They are then cut up one by one into lengths of about one or two feet. Those having flower spikes upon them are retained, and the rest is thrown away. The portions selected are spread out in the dew for the night.

The work of the second day begins at noon. It consists in alternately pressing and drying the crop and getting rid of useless leaf and seed. The branches are piled by bundles of five or ten, flower spikes inwards and overlapping, in a circular heap about four feet in diameter. The workmen tread this down, moving round upon it and supporting one another. Bundles are added from time to time till the heap is about two feet high. A mat is then placed over the heap, and the men sit or place weights upon it. After half an hour of the pressure the pile is unstacked, the bundles are taken off and beaten together over a mat to shake out seeds and leaf. The heap is again built exactly as before, the upper layers of the previous heap being put at the bottom of this, and the processes of treading, pressing, unstacking, and beating are repeated. The bundles are now laid out side by side on mats and trodden individually, the workman holding the stem ends with one foot while he passes the other foot downwards over the flower. The bundles are turned and beaten against the mat during this process. When it is complete, they have been reduced in size, and consist of four or five twigs each. They are then laid in slanting position over a pole on the ground, and left for the night.

The third day's work begins in the early morning. The twigs are separated, and again piled in bundles in the same circular form as before, trodden for a short

while, and covered up. Work is resumed at 10 A.M. The heap is unstacked and the bundles are carefully handled to remove leaf. They are then laid out in rows and trodden. During this process they are turned over, and at intervals the sun is allowed to play upon them. They are then handled again and gently beaten, and spread out more completely than before. Those that have retained an undue quantity of leaf are stood up in the sun. The last process is to press the twigs individually with the feet in the way already described. The manufacture is now complete. The flower spikes have been pressed into flat masses, and the leaf and seeds have been as far as possible removed. In the larger specimens the branches stand out from the stem and one another, the whole being quite flattened. The twigs are gathered into bundles of two standard sizes—a certain quantity of large twigs in the one and of small twigs in the other. This is called flat or *chapta* ganja.

Manufacture of round ganja.

222. The manufacture of round ganja is not completed till the fourth day after the plants are cut. The plants are gathered somewhat later in the day and laid out under the open sky for the night. The sorting is done the next morning, a great deal more of the woody portion being rejected than in the case of flat ganja. The twigs are laid out in the sun till noon, when the men return to the *chator* and rolling is begun. A horizontal bar is lashed on to uprights about four feet from the ground, and mats are placed on the ground on each side of it. Bundles of twigs, either tied together by the stem ends or not, according to the skill of the treader, are set out on the mats. The men range themselves on each side of the bar, and, holding on to it for support, proceed to roll the bundles with their feet. One foot is used to hold the bundle and the other to roll it, working down from the stems to the flower heads. This process goes on for about ten minutes, and during it the bundles are taken up and shaken from time to time to get rid of leaf. The bundles are then broken up and the twigs exposed to the sun. A second but shorter course of rolling by foot follows, and then the twigs are hand-pressed, four or five together. After this the twigs are opened up and exposed to the sun again. Towards evening the twigs are made into bundles of about one hundred, and placed on mats and covered up for the night.

The next morning the bundles are untied and the twigs again exposed to the sun. If they are sufficiently dry by midday, they only require a little handling and rolling to complete the manufacture. If they are not dry enough, the first course of rolling has to be repeated, after which the useless leaves fall off with a very little manipulation. The twigs are next sorted according to length and tied into bundles of three descriptions—short, medium, and long. In this process all useless twigs and sticks are eliminated. The bundles are placed in rows under a mat which is kept down by a bamboo, and left for the night. The manufacture is completed the next day by exposing the bundles to the sun, heads upwards, till the afternoon, and then searching them with hands and bits of stick for any leaves that may have remained in them. These are shaken out, and with them pieces of the compressed flower heads, which have been accidentally broken off, fall on to the mats.

The Bengal manufacture specially elaborate.

223. Babu Hem Chunder Kerr writes that when the preparation of the round ganja is carried out by the dealer who has bought the standing crop, much more care is taken to reject stick and inferior flower head than when the cultivator is the manufacturer. The round

drug is the superior product, and contains much less useless matter than the flat. But it is plain that in both cases the process of manufacture in Bengal is technical and elaborate, and this is the point which it is desired to bring into strong relief. It may be noted that occasionally, when the weather is unfavourable, the drying is effected by fire, with the result that the ganja is discolored and reduced in market value.

The effect of the manufacturing processes.

224. Dr. Prain describes the purposes which are served by the above processes: "The drying process (*a*) removes the watery juices of the plants, and thus not only reduces its weight as an excisable article, but removes to a considerable extent the risk of mould; (*b*) causes the comparatively inert small leaves to shrivel, and so makes their removal more easy. The kneading process (*a*) removes more or less completely the comparatively inert leaves, still further reducing the weight. The article produced, being for its bulk more active in proportion to the absence of leaves, the more thoroughly they are removed, the better a sale does it command; (*b*) it presses together the resinous parts on which the active principle is most plentifully deposited. These being rendered somewhat sticky by the presence of the resin become more or less agglutinated, and are thus less liable to fall off in transit, and so reduce the active power of the ganja." And he discusses these principles with some care. The Commission would have been inclined to attribute a great part of the importance of the kneading process to its effect in shutting out the access of air to the interior of the ganja masses, and so tending to delay their deterioration.

Disposal of stick, leaf, seeds, and fragments.

225. It has been seen that a great quantity of stick, leaf, and seed, and not a little flower head, have been separated from the bundles of prepared ganja. The stick may be used as fuel. The leaf is winnowed from the seed and thrown away, though it has been proved by analysis to contain the narcotic principle in larger quantity than ordinary bhang. But it cannot be ascertained that it is used as bhang. The seeds are kept for the next year's culture, and the superfluity may find its way into the market. The seeds are not narcotic, and they are sometimes eaten, besides being used for the expression of oil and other purposes. The bits of flower head are, in the case of flat ganja, picked up and pressed into the mass of the flower heads again or burnt. The latter will probably depend on the vigilance of the Government supervisors. In the case of round ganja, they form the "chur" or "fragments" on which the excise tariff imposes the highest duty, because in that state the drug is absolutely free of leaf and stick.

Preparation of bhang.

226. Bhang as recognized by the Excise Department is the dried leaf of the *wild* plant. The drug that enters the Bengal golas is collected chiefly in the districts of Bhagalpur, Monghyr, and Purnea. But the bhang of Patna, Benares, and Behar is also spoken of as being of high quality. The preparation consists simply in drying the leaves. The plants are cut in April, the *Chaitra Sankranti* being considered an auspicious as well as a seasonable day, but the gathering goes on up to June and July. They are laid out in the sun, and one day may be sufficient to dry them so as to allow the leaves to be shaken or beaten off. The leaves are collected with precautions against the mixture of dust or dirt, packed in bags, and so conveyed to the local gola, and eventually to the shops. The early flowering stage would seem to be that in which the plant yields the best bhang.

From the manner of collection and manufacture, plants of both sexes and also some flower heads must enter into the product. It is stated by one witness that the seed is as far as possible separated and rejected. This is probably correct. Another states that "wild bhang is collected by the people in Bhagalpur, Monghyr, and Purnea districts in two forms—one consisting of dried leaves and small stalks, and the other of the flowering shoots; this latter not to a great extent." This appears to refer to the collection for home consumption, and not that by the licensed dealers for sale. The flowering shoots here referred to are probably the female flower heads, in which there is reason to suppose the resin is occasionally secreted in more than the usual quantity, even when the plant is uncultivated.

Bhang is gathered from the spontaneous growth for home use wherever that growth is found. There is considerable conflict of opinion as to the extent of the practice. The Commission are inclined to accept Mr. Gupta's view that "the use of untaxed bhang is general," and that, among the rural population at least, the consumers collect the drug for themselves whenever the plant is at hand. Looking to the prevalence of the wild growth over a great part of Bengal, and the absence of any technicality in the preparation of the raw article, any other view would require to be supported by strong evidence. The leaf is for the most part simply dried; but Mr. Jenkins, Collector of Dacca, reports that he has been told of a more costly process, which consists in the leaf being boiled in milk and water after being sun-dried, and again dried for storage. This is confirmed by a pleader of Dinajpur, who professes to know the method of preparation of bhang from the wild plant. He says, probably confusing the sexes, that the female plant is generally used, though the male may be also, and that "after the leaves are dried for some time, they are boiled in a mixture of from 10 to 25 per cent. of milk and 90 to 75 per cent. of water. After drying the leaves once again, they are fit for use as siddhi or bhang." It is, however, certain that this practice is uncommon, and that simple drying is the method by which bhang is almost universally prepared for keeping.

Preparation of ganja from spontaneous growth.

227. It has already been suggested that ganja can be got from the wild plant. The question is important, and must be examined in some detail at the risk of the discussion appearing elementary to many readers. It has been shown that the plant is not wild in the exact sense of the word, and for present purposes this fact must be emphasized. The plant is not only an old escape from cultivation, but its tendency to revert to the uniform characters of a wild species is being constantly checked by contact with cultivation. Its association with man frequently supplies it with the richest kinds of food, and with all vegetation this tends to the development of abnormal characters. The generative functions may thus be affected to the extent of partial or even complete destruction in individual plants or groups of plants, and these may be of either sex. It is possible also for the female plant to be secluded in a variety of other ways. The experience of cultivation justifies the presumption that if the female plant in healthy growth is prevented from freely developing its seed, its flower spike will be highly resinous. There appears therefore to be a strong probability *a priori* that the spontaneous growth quite untended should often produce a flower head which can be converted into ganja. Evidence is not wanting to corroborate this conclusion, for it speaks of wild ganja being collected and smoked; but it is impossible to pronounce posi-

tively with regard to any of it that the plants from which the ganja was gathered was altogether innocent of cultivation or tending.

Evidence as to existence of wild ganja.

228. The quality of this evidence may be judged from the following references. It leaves no doubt that many people are able to distinguish the plants of different sexes in the spontaneous growth, calling them by the names of ganja and bhang, and recognize the more narcotic character of the female or ganja plant, sometimes preserving it for the purpose of smoking. The Assistant to the Director of Land Records and Agriculture, when enquiring regarding the spontaneous growth in Bhagalpur and Purnea, observed that a few selected plants, mostly females, were not uncommonly left in the ground. He reports: "These acquire a nice bushy appearance not unlike that of the ganja-bearing plant. All this made me suspect that the people knew a great deal more about the bhang plant than they were willing to avow. I was told by several persons, among them a European gentleman who has long resided in North Bhagalpur, that bhang is often used to adulterate ganja." Abhilas Chandra Mukharji says: "*Jata* bhang (*Sivajata* bhang).—The flower of this kind of bhang is whitish; it grows luxuriantly, and the plants are of a larger size than the ordinary wild ganja plants. The flowers resemble ganja flowers. The flowers and leaves agglutinate naturally, and look like *Sivajata* (cluster of hair of the god Siva, from which it derives its name). Its intoxicating properties are less than the Rajshahi ganja. The flowers are collected and smoked just like ganja. It grows along with other hemp plants rather scantily. It grows near Toke and in some parts of the Manikganj Sub-division of the Dacca district." He states again (9-23) that bhang is rarely smoked, and that only by the lower and poorer classes; that the part of the plant used for smoking is the *sir-kali* (leading flower spike), which is dried and preserved. Sosi Bhushan Roy says after remarks which show that he has a very fair idea of what he is talking about: "It may also be supposed that hemp in its degenerated and wild condition becomes what we call bhang or siddhi. I have myself seen that such bhang plants as have a luxuriant growth bring forth leaves, which sometimes get matted together, and, if collected before inflorescence, might to some extent serve the purpose of ganja." Witness (82) states (answer 23) that the Nepalese prepare a crude sort of ganja which they call bhang, and this they always smoke, and (22) gives evidence to the same effect. Mr. Maguire (23), Officiating Collector of Khulna, writes: "A sort of ganja is prepared from the wild plant wherever grown, but, except when prepared from female hemp, it is very weak." The Collector of Bankura (10) reports the possibility of preparing ganja of very inferior quality from the wild plant. Babu Suresh Chunder Bal (69) says: "I think ganja can be prepared from that particular variety of the wild plant which is known to the people as the ganja plant." Bhuban Mohun Sanyal of Purnea (225) states: "I hear that ganja cannot be prepared from the hemp plant generally growing wild in the district. I have, however, heard that it can be prepared from a plant sometimes seen (though very rarely) growing wild and known as ganja plant." These are all good witnesses, though the evidence of some of them is based on inquiry and not personal observation. It is unlikely that they are talking of anything but the hemp plant, for it is very well known in India generally, and specially in Bengal and Northern India. The descriptions given by witnesses 63 and 196 pourtray the female hemp plant very clearly. It appears then that a very

inferior but smokable ganja may occasionally be obtained from the spontaneous growth. The great majority of witnesses nevertheless state that ganja is not procured from the wild plants, and undoubtedly what is ordinarily accepted as ganja cannot be so obtained. There is no evidence that it undergoes any process after being gathered but simple drying.

Preparation of ganja from illicit cultivation.

229. The methods followed in the homestead cultivation of Bengal and the Tributary States of Orissa and Chota Nagpur have been described. Regarding the possibility of preparing ganja from the homestead cultivation of Bengal, the Sub-divisional Officer of Jangipur may be quoted. He writes: "I have seen ganja plants detected in Bhagalpur and Jangipur. From their twigs ganja as good in appearance as in Naogaon (the particular sub-division where ganja is cultivated under Government supervision) can be prepared, but it is alleged that the flavour is not so good as those grown in Naogaon." This cultivation is of course illegal in British territory, and it is probable that but little ganja is obtained from it. No information has been gathered as to any special care being taken in the preparation of it, and it is probable that the usual practice is simply to dry it.

Tributary States of Chota Nagpur and Orissa. Preparation of ganja and bhang.

230. In the Tributary States of Chota Nagpur and Orissa ganja is said to be obtained from the wild as well as the cultivated plants, but the evidence points generally to the plant being more or less cultivated in all cases. There is evidence also that some care is taken in preparing the drug (ganja), and it is probable that the same or very similar practices prevail in both groups of States. Mr. Grimley's inquiry of 1890 gives some information on this subject. Sirguja reports: "The first leaves are plucked away, and from the second leaves the ganja and bhang are made;" and again—"When the leaves grow intertwined, they are used as ganja." Udaipur—"It is exposed to the dew during the night, and afterwards the plants are bundled and dried in the sun. After two or three days they become fit for use." Gangpur—"When the plants mature they are broken off with all their leaves and branches, and are kept wrapped up for some days in the leaves of a tree called *khair* under straw." Bonai—"When the plants are ready, those that are intertwined are cut and dried and preserved, and while still soft are wrapped round with the bark of the plantain tree."

The present evidence furnishes no addition to this information from the Chota Nagpur States. But the District Officer of Angul in Orissa states that "when the tree is ripe and the leaves assume a yellowish colour, the plants are cut, tied into bundles, or rolled in a mat or gunny bag, and then placed under heavy weights for two or three days. Then it is taken out, exposed to dew, leaves and seeds are shaken off, and then it is dried and tied into bundles and stored. This makes flat ganja." It seems clear that by the use of the word "flat" the witness is not referring to the Rajshahi drug, but to that of the country of which he is speaking. Mr. Taylor (36), who has had a long experience of Orissa, but admits that his information on the particular point has been recently acquired, says that "the hemp heads are cut on the seeds ripening in November. The heads are tied in small bundles and sprinkled with lime water, and then alternately buried and exposed to the sun for two or three months, when the ganja is fit for use." He says in his oral examination: "The plants are buried for a week at a time without anything to protect them from contact with the earth."

These processes amount after all to little more than simple drying and removal of the coarser leaves. It is difficult to understand what purpose is served by the process of burying which Mr. Taylor describes, and it may be doubted if the description is accurate. The resulting product is far inferior to Rajshahi ganja. This has been amply proved by inquiries made in past years, in course of which the drugs were compared. The leaf bhang is prepared by simple drying, as in Bengal proper; but it will be seen that the weak ganja of the Garhjat is largely consumed as drink.

Hill Tippera.

231. The preparation of the drugs in Hill Tippera is certainly not more elaborate than that just described; but no information on the subject has been furnished.

Preparation of charas.

232. There is no evidence of charas being made in Bengal, though the resin is available in plenty in the cultivated plant of the Ganja Mahal, and in a less degree in other growth. This form of the drug is not appreciated in the province, and the absence of demand no doubt accounts for the art of manufacture not having grown up. An infinitesimal amount may be collected from the feet and hands of the operators in the ganja manufacture, but it is doubtful if this small supply is utilized.

Classes engaged in preparation of the drugs.

233. The preparation of ganja and bhang is carried out by the cultivators and the servants of the bhang contractors respectively. The preponderance of Musalmans in the cultivation of ganja in the Ganja Mahal has been noticed. Beyond this it cannot be said that the preparation of the raw drugs is the business of any special class, unless it be that the Hindus from Behar and the North-Western Provinces, being in large proportion confirmed bhang drinkers, are those who also most commonly collect that drug for home consumption.

Assam.

234. The dried tops of the wild hemp plant are used to some extent for smoking. But there is nothing to show that the article is prepared in any other way than by simple drying. The extermination of the male plant in connection with the wild growth does not seem to be practised either in the valley or on the hills within and on the borders of the province. This is an essential preliminary to the preparation of the superior form of ganja. The dried tops make bhang which may be used for smoking or drinking. Excise ganja is known among the consumers as *mohini* bhang. The epithet *mohini* or fascinating is never applied to the wild product. There is no evidence that charas is prepared or even known in the province.

North-Western Provinces.
Preparation of ganja from plant cultivated secretly.

235. Mr. Stoker made special enquiries regarding the local production and preparation of ganja, and, as regards the extent of the practice, the results are given in a concise form in his memorandum. The evidence furnishes but few details of interest to add to his account. The cultivation of hemp for the production of ganja is not carried on openly. "The whole of the ganja offered for public sale is imported. At the same time it would be incorrect to say that ganja is nowhere grown or manufactured. Careful enquiry has elicited reports from several districts that a small amount of ganja is surreptitiously made." These are Mr. Stoker's words, and they exactly express the impression

left by the evidence which the Commission have collected. No witness has given a detailed description of the method of preparation. Mr. Stoker received a report of the process in vogue in Ghazipur, which he says "closely resembles that employed in Bengal." This is only corroborated by two or three witnesses to the extent that the ganja is put under pressure. Specimens of ganja from Ghazipur and Sultanpur were forwarded to the Commission, and Mr. Stoker's opinion is that the Ghazipur specimen was superior to the ordinary *pathar* ganja, and not much inferior to Bengal *baluchar* (flat). The other was much the same as *pathar*.

Preparation of ganja from wild growth.

236. Regarding the preparation of ganja from the wild growth, Mr. Stoker has ascertained that the produce of the female plant is smoked in the Kheri and Bara Banki districts, and he says that there are indications of similar use in other districts. The evidence on this point is rather strong, and leads to the belief that wherever the plant is common as a wild growth, the poorer classes of consumers make use of it for smoking. The distinction between the male and female plants is well known, as Mr. Stoker states; and some of the witnesses say that the plants are operated upon by twisting the stems to prevent flowering. The plants so treated must be the ganja or females, though that is not expressly stated in all cases. But witness (155) may be referred to, who states that bhang is the natural plant; when it is twisted it is called ganja. A Deputy Collector (46) states that ganja can be prepared from wild female hemp plants if all the males are uprooted from their neighbourhood, and he is a witness who does not appear to be drawing on information he may have picked up regarding other provinces. It has been seen in connection with the cultivation that the advantage of isolating the females is known to some persons, the knowledge having been handed down from a time when ganja was openly cultivated, and it is difficult to believe that it should be confined to a very small number. The fakirs all over the country, who are mentioned as the principal secret cultivators, are certainly not ignorant on this point, and would disseminate the knowledge. The report of the Deputy Commissioner of Kheri, quoted by Mr. Stoker, that this art is not known, appears therefore to be open to doubt, or, if true, to be true only of the locality reported upon. The subject is probably one on which people are inclined to be reticent for the same reasons as actuated those of whom the Assistant to the Director of Land Records and Agriculture in Bengal made his enquiries. The rearing and tending of the hemp plant in the North-Western Provinces may not be illegal; but there is plently of evidence that the people think it to be so, and that would be sufficient to make them cautious in giving information. There is no evidence that the ganja gathered from the wild plant is prepared by any other process than mere drying. Witness (202), a raiyat of the Kheri district, and (48), a Deputy Collector of Lucknow, state that the ganja plants are gathered in November and December. This would seem to refer to the higher lands. The season of growth on the low lands appears to be from December to June. It may be noted that Mr. Wall, a late Commissioner of Excise, does not believe that ganja is produced by the wild plant, and that many other witnesses take the same view. The local production of ganja does not appear to have ever been so considerable, at least in recent years, as to attract the attention of Government in the Excise Department, and there is no reason to suppose that it has increased since it was suppressed in Oudh. The subject therefore is only of secondary importance.

Preparation of bhang.

237. Bhang is prepared by cutting and drying the plants, cultivated or wild, and shaking or beating out the leaves. This is done either by the contractors themselves, or by "residents of jungly tracts for sale to licensed vendors" (38). The districts where the cultivated bhang is produced have been named. The supply of wild bhang is drawn from various places in the belt of wild growth below the Himalayas. The gathering goes on from March to June. The zamindars on whose lands the plant grows appear to make some money by selling it to the contractors (247). Bhang is sometimes dried under straw or other covering, when it turns yellow, instead of retaining the green colour, which it does if dried in the sun (21, 248, 203). The object of this is not clear.

Preparation of charas.

238. In these provinces charas is prepared to a small extent from the crops grown for fibre in the Himalayas, to a less extent from the Himalayan wild growth, and to a still smaller extent from the wild growth of the plains. A very small amount may even be prepared from the plants cultivated in a desultory way. The methods of preparing charas from the fibre plants are described by witness (49). The *sujango* or female plants, having been cut in November, are spread out to dry for twenty-four hours. The people then sit round in the heat of the day, and pluck off the flower heads, which are now full of seed, discarding the coarser leaves. Each handful is rubbed between the palms for about ten minutes and thrown aside. In course of time a quantity of juice accumulates on the palms, which is scraped off and rolled into balls. These are charas. Sometimes the plants are trodden instead of handled, and the feet scraped. A more uncommon method, by which a choice kind of charas called *chahar mulhi* is obtained, is to pass the hands up the ripe plants while they are still standing in the field. This plan is not approved, the witness says, because it is supposed to damage the fibre. Other witnesses (21, 43) mention the practice of running through the crop or growth on a dewy morning, and scraping off the resin which adheres to the body. Witness (248) states that the resin, having been collected, is kneaded on hot stones; but the account of witness (49) that the process of manufacture ordinarily ceases with the making of the resin as scraped from the hands into balls is probably reliable.

There is a considerable amount of evidence and opinion that charas is prepared from wild plants. Witness (49) states that in a small area at an elevation of 8,000 feet called Urgum in Palli Talla Pamkhanda, which appears to be a pargana of Garhwal, the wild hemp is of superior quality. It grows near a temple of Siva, to which fact the people attribute its superiority. Charas is made from it by the common process of rubbing with the hands, and is given to fakirs and pilgrims to Kedarnath and Badrinath. Witness (232) speaks of the manufacture from the wild plants, and states that the leaves after the rubbing form ganja or bhang, which is used for drinking. Witness (43) deposes to the production of charas from the wild growth in the Bhabar and Terai. Witness (109) has seen it made apparently in the Almora country. Witness (38) has seen the process on the banks of the Gogra which bounds the Nepal and British territories. And so we are brought down to the plains. Mr. Stoker writes that "in Garhwal a substance is produced which might be classed with either ganja or charas. After the charas has been extracted from the female flower, the powdered or broken

flowers are mixed with hemp seed and smoked in a *chillum*. This seems akin to the *garda* of the Punjab."

Miscellaneous information about the preparation of charas.

239. The evidence from this province contains information about the manufacture of charas in Nepal, Yarkand, Peshawar, and Kandahar, which may be noted, though it is not all direct evidence. The Bhutias of Nepal scatter ashes on the plants in the evening. In the morning they enter and walk through the crop or jungle clothed in leather, to which the resin adheres. This is scraped off and makes a strong kind of charas. It may be noted that Dr. Gimlette, Residency Surgeon, Katmandu, was unable to verify the accounts he had heard of this process, but found that in the country 50 miles round the capital the drug was collected by rubbing the young flowering tops between the hands *in situ* (Watt). In Yarkand, according to witness (62), the dried plants are beaten over a cloth, and the greyish powder, which falls upon it, is collected and packed in bags, where it agglutinates by some process, of which exposure to the sun forms part. Witness (192) has "seen charas prepared near Peshawar and Kandahar. People go into the fields with leather leggings on, and the charas sticks to them, and is scraped off." The same witness has seen bhang prepared in great quantities at Hardwar, Lahore, Kabul, and Kandahar.

North-Western Provinces States.

240. Regarding the Native States in the North-Western Provinces, there is nothing to be added to the information collected for the province generally.

Punjab.

241. Though some witnesses make mention of the smoking of bhang leaves, there is no evidence of the preparation of the flower head either of the uncultivated or cultivated plant for use as ganja. The smoking of the produce of the plant in any form except charas is evidently extremely rare. According to witness (59), "the word 'ganja' is sometimes applied to charas."

Preparation of bhang.

242. Bhang is prepared both from the uncultivated plant and from the small quantity of cultivated plant in the ordinary way, *viz.*, by simple drying. Mr. Drummond (13) says that the flowering tops are preferred. The zamindars do not generally take any payment for the bhang gathered from their lands. The plant grows from December to June-July. The usual time for gathering appears to be May. No. (73) says May or June. Lala Kesho Das, Extra Assistant Commissioner, reports that in June-July "the hemp plant acquires peculiarly noxious qualities, and hence it is during that fortnight that bhang intended to be used as a drug is cut." The bhang of some localities is regarded as superior, such as that of Ambota and Gagret, of Bhimbar in Kashmir, and of Gurdaspur. The cultivated plant may yield a superior quality of drug, but there is not much evidence of any preference for it over the wild drug.

Preparation of charas.

243. There is practically no evidence of charas being prepared below the mountains. The method of preparation followed in Kulu and the Hill States is that of rubbing the flower heads between the hands and scraping off the resin accumulated on the palms or

on the feet if the operation consisted in treading the plants. The solitary piece of definite information supplied about preparation in the plains is given by Mr. Kirthi Singh (14): "Sometimes a cultivator may want a little charas for private use, in which case he beats the flowering twigs over a piece of cloth laid on the ground, and then collects the greyish white powder which falls. This requires only to be dried a little in the sun, and it is ready for use."

Charas in "Punjab Products."

244. In the "Punjab Products" the manufacture of this sort of charas called *garda* is described. The finest quality is when the dust is of a reddish colour. This is called *surkha*. When it is green, it is called *bhangra*. The most inferior is that which adheres to the cloth after shaking, and has to be scraped off or shaken off with more violence. This is called *khaki*. In each case the dust has to be kneaded with a small quantity of water into a cake, and then forms charas. It is stated that this drug is much in use. The specimens which formed the basis of the article were none of them from the plain districts of the Punjab, except possibly one from Dera Ghazi Khan. They came from Lahoul, Spiti, Bokhara, Yarkand, Dera Ghazi Khan, and Kashmir.

Preparation of charas in Yarkand.

245. It will be of interest to quote other descriptions of foreign manufacture. Witness (86) has been in the habit of visiting Ladakh for purposes of trade, and has there learnt the following details from Ladakh merchants: "In Yarkand bhang is cultivated in the month of Baisakh in waste lands and round the fields of other crops for the manufacture of charas. It remains standing for seven months, and is then reaped in the month of Katik, when the blossom is ripe, and then stored on the roofs of houses. It remains there for one month and gets dried in the meantime. The zamindars then thrash the plants after separating the larger leaves by night within their houses. The smaller petals and flowers then fall on the ground and are reduced to powder. It is then sifted thrice, put in bags, and sold to the traders. The merchants go on storing it up until the month of Jeth comes, when they place it in the sun, and a kind of oleaginous substance oozes out of the powder. It is then kneaded like tobacco and put in bags made of cloth. The following three or four kinds of charas are prepared from it—*mushak, bahara, pai, and kuppi*. They are then closed up in leather." Mr. Dalgleish is quoted by Dr. Watt as giving a description of the preparation similar to the above. The Deputy Commissioner of Bannu says that honey is mixed in the powder of the flowering tops, after which the stuff is packed in leather bags and kept for a year in the sun. Hari Chand, Assistant to the Commissioner of Excise, reported in 1890 of the Yarkand manufacture that "the leaves are ground in December. The flower is kept in bags of five sérs each till June. The bags are then put in the sun, and the flower rubbed with hands and feet till it gives oil. It is then put in leather bags and hammered till it becomes one block. The blocks are of 54 sérs each." There is a certain similarity in all these methods, and they probably give with fair accuracy the general outline of the important manufacture of Yarkand. *Garda*, as described in the "Punjab Products," would appear to be the Kashmir preparation. The word seems to mean merely dust in its common use.

Punjab States.

246. The memorandum on the province contains all available information regarding the Punjab States.

247. The method of preparing Khandwa ganja is described by the Deputy Commissioner of Nimar and the Excise Commissioner. The harvest begins in the first or second week of November. The flower heads, which the cultivators call *mal* or produce, are broken off with about twelve inches of twig, carried in baskets to the threshing-floor, and spread out on it in a layer nine to twelve inches thick. Mr. Robertson states that on the first day a heavy roller is passed over them, but this detail is not contained in Mr. Drake-Brockman's report. The crop is exposed to the dew for the night. The next day the twigs are formed into heaps, and each heap is trodden in turn, and when not being trodden is turned over and exposed to the sun to dry. This goes on for four or five days, and results in the twigs being pressed flat and deprived of a great portion of their leaves and thoroughly dried. The produce is then removed to the cultivator's house, where it is built into a stack five or six feet high, and has heavy weights placed upon it. In about a week it is packed in gunny bags and removed to the storehouse at Khandwa.

Central Provinces. Preparation of ganja.

248. In outward appearance the Khandwa ganja or *pathar* differs from that of Bengal or *baluchar* in being green in colour, and having a much larger quantity of leaf left in it. It does not bear any comparison in the appreciation of smokers with *baluchar*. The latter is a very special article, and no ganja will be found to compare with it in any province. Bhang is not produced in the Central Provinces. Khandwa ganja is used instead for drinking purposes by the commoner sort of consumers. Well-to-do people import their bhang from Central India. It is, however, difficult to believe that the leaf and fragments resulting from the manufacture of Khandwa ganja do not pass into consumption at all. There is some evidence that they do. In Bengal the ganja cultivators could afford to throw away the leaves, for the wild bhang was to be got for nothing within a reasonable distance, and made better bhang than the cultivated leaf, which was consequently of no value. In the Central Provinces the case is different, and it may be doubted if the people are altogether careless of the leaf as a secondary product. There is no evidence of charas being prepared in the Central Provinces. The ganja, having passed into the Khandwa godown, is picked before issue to contractors, and again picked before issue from the tahsils, so that about 45 per cent. only finds its way into the retail shop.

Khandwa ganja inferior to that of Bengal.

249. The Feudatory States prepare no drugs.

Feudatory States, Central Provinces.

250. In the Madras Presidency, especially towards the south, the name bhang is applied almost exclusively to the prepared drink, which may be made from the pure leaves, but is generally made from the material which is known and sold as ganja. Bhang as a distinct form of the raw drug is not known. It is even doubtful if the plant itself in the part of the country indicated is called bhang. It would seem that as the region of wild growth is left behind, the name by which the cultivated plant is known, *viz.*, ganja, comes more into general use. It will not, therefore, be necessary to mention bhang in this chapter except where it comes into the description of ganja preparation. Charas is not manufactured at all in the Madras Presidency.

Madras.

Bhang not known as distinct from ganja.

251. Mr. Benson has given a description of the preparation of ganja in connection with the regular cultivation in the North Arcot and Kistna districts. The methods differ materially. "In the Javadi Hills the plants are cut and carried bodily to the village threshing floor. They are there sorted, the flower spikes and upper leaves being retained and the sticks thrown away. The selected heads are spread out for three to five hours in the heat of the day to dry, and are then loosely rolled in the hand to work out such seed as may have been formed and to break up the leaf that remains. This working also causes the spikes to stick to one another to some extent. The broken leaf is then winnowed out, collected, and powdered." The flower heads are then placed in a thin layer in a basket which has been dusted within with leaf powder, and are trodden by one or two men according to the size of the basket. After the operator has passed over the layer four or five times, it is dusted with leaf powder, and a fresh layer of spikes is put into the basket on the top of the other, and the treading is repeated. This process goes on till the basket is full. The contents are then turned out on to flat hard ground, and a stone is placed on the pile with other stones to add to the weight. The material is left thus for the night. Next morning each layer is taken off separately, broken up, and spread in the sun. Each piece is trodden and turned over from time to time. In the evening the pieces are again re-piled and weighted for the night, and the next day the process of exposure is repeated until the material is thoroughly dry. "Great importance is attached to the thoroughness of the treading, the sufficiency of the pressing, and the completeness of the drying; the quality of the drug being said to depend on the manner in which those processes are carried out. If the latter are not dried sufficiently, they appear green and are of inferior quality, good ganja being brown." When fully cured, the drug is stored in the raiyats' houses under pressure till sold.

Preparation of ganja in North Arcot.

252. In the Kistna district, if Mr. Benson is correct, the pressing is entirely neglected. The plants are cut bodily and laid out in the field for three days to dry. On the fourth day they are tied by bundles of ten and piled head and tail. "The heaps are opened and the bundles re-piled next day, the process being repeated over several days." If the quantity is small, the drying is done at the raiyat's house, but in all cases the crop is finally carried to the house. A month later the spikes are removed one by one, and spread out in the open for one night to soften and become pliable. In the morning the spikes are collected and put into large gunny bags, being packed closely therein by a man treading them down. The produce is then ready for sale.

Preparations of ganja in the Kistna district.

253. The process has been described shortly by other witnesses. They nearly all mention pressing as a part of it, though the methods may be different. Alternate exposure to sun and dew seems also to be generally practised. The drug is usually stored by consumers in earthen vessels. One witness (106) from Ganjam, after giving a careful description of the manufacture of ganja, proceeds to say that the dried leaves which have fallen out in the process are used as bhang or patti. "After carefully removing the stalks, the dried leaves are boiled in water for some time; and the boiled leaves are carefully squeezed with the hands to purge them of all filth and dirt, and then dried in the sun. The dried leaves are next boiled

Peculiar method of preparing bhang.

either in milk or cocoanut water. The quantity of milk or cocoanut water must be proportionate to the quantity of leaves boiled, so that the milk or cocoanut water might be entirely absorbed by the leaves. They are again kept in the hot sun for about three or four days. After they are well dried, they are preserved in earthen vessels for use." Similar processes were mentioned in the Bengal evidence, but they require so much care and time that they can hardly be common.

Travancore.

254. The following information seems to point to the preparation of ganja from the spontaneous growth in Travancore. It is said that *poo* ganja, or flowering ganja, is pressed together while still green so as to get matted, and when the mass begins to show signs of rotting, "it is dried in the shade and passed off in the market as *chada* ganja." *Chada—jheda* in Sanskrit—means tangled or braided, and *chada* ganja is the name of the imported article. *Poo* ganja is the local stuff, which from the description would appear to be little, if at all, cultivated. There is no other information of interest from the Madras States.

Bombay.

255. The preparation of ganja in Bombay is described by several witnesses. Mr. Ebden's (5) description, as coming from the district of largest cultivation in the Presidency, and being the most complete, may be quoted :—

"(*a*) *Ganja.*—Harvesting methods differ somewhat. In some cases the tops are pulled off by hand; in some they are cut. In some the central largest tops are collected and treated separately as first sort ganja; the central tops of side branches form second sort, and other smaller tops are third sort, and are called chur. The further process is much the same in all cases. The tops are heaped according to taste in narrow rows or in large squares about six inches thick, the different qualities when separately collected being separately heaped. The heaps are then trodden under foot. Some manufacturers tread the fresh tops at once; some let them dry first for various periods. After treading, it is turned over by hand and again trodden. The process of turning and treading is repeated at intervals of three or four days, with local variations of treatment in the intervals. In some places it is heaped in round heaps called *chakis*, and weighted at top till midnight, and then opened up and scattered and ventilated till dawn, when it is again laid out and trodden; and so on till it is judged to be ready, when it is packed in bags, and as a rule it is speedily removed by the wholesale purchaser.

"The treading-floor is sometimes prepared like an ordinary threshing-floor with clay and cowdung. I have lately witnessed the operation of treading, and in that case the floor was simple *moorum* soil on a *nalla* bank, and had undergone no preparation beyond cleaning and sweeping. The ganja was spread in squares of fifteen or twenty feet wide and about six inches thick. A line of eight or ten men danced on it to the music of a *tom-tom*. Treading began in the outer edge of the heap, and was continued in a spiral until the centre was approached, when the men fell out one by one as the space grew smaller. They followed close on one another, dancing sideways in the leader's footsteps. The *tom-tom* appeared to be highly necessary, and kept them at it.

"(*b*) *Charas.*—This is locally a bye-product which is not brought into account, but appears to be the harvesters' perquisite, who probably part with it to friends who smoke, if they don't want it themselves. It is the resinous substance that sticks to the hands or collects on the sickle when cutting or plucking the tops. The hands are now and then rubbed together, and the charas is collected in the shape of a pill, which is naturally half dirt and sweat and half charas. A piece about the size of a marble may perhaps be the reward of a day's work.

"(*c*) *Bhang.*—This name is given indifferently to the refuse of the treading-floor where ganja is prepared, and to the produce of the seeded plants and of male plants when the crop has been grown for seed. In the latter case the tops are laid on a floor, and the seed is beaten out with sticks or trodden out by foot. The seeds are separated from the mass by means of a sieve, and the balance of broken leaves, etc., is called bhang."

The bhang crop in Gujarat is turned into drug by drying the plants and shaking or beating them so as to detach the leaves, flower, and fruit. The character of the bhang of the Bombay Presidency must be noted. When it comes from the ganja crop, it consists very largely of pieces of the female flower head, and is in fact, as many witnesses have described it, largely composed of what is known in Bengal as chur. If the customer asked for chur, the shopkeeper would produce what he calls bhang. The preparation of the drugs is generally carried out by the cultivators themselves, sometimes by contractors.

Bombay States.

256. The States in the Deccan which cultivate ganja prepare the drugs in the manner already described. In the Northern Agencies there is but little cultivation, and that of scattered plants only. There is no evidence that the flower heads undergo any preparation besides simple drying.

Aden.

257. The drugs are not prepared in Aden.

Sind with Khairpur.

Preparation of bhang.

258. The cultivation in certain districts of Sind and in Khairpur is said to be for the production of bhang only, and no doubt that is the principal product; but a small amount of superior flower heads is turned out which goes by the name of *ghundi* or *ghundi* bhang, and is occasionally used for smoking. Mr. Giles (2) states that when the crop is ripening, the upper portions of the plants are cut off and preserved separately. These are regarded as the "tit bits." They are dried with their seed and stalk, and do not appear to be subjected to any special process. They are called *ghundyun*, and are practically no doubt ganja. The rest of the crop is dried and flogged, and the broken leaves, flowers, and seed form bhang. A certain amount of this is winnowed for the seed; but the mass is sold as it is to the contractor, who seems generally to sift it and clean it of seed before retailing it.

Miscellaneous information.

259. Witness (5) from the Upper Sind Frontier, while stating that ganja and charas are not prepared in the province, gives in an appendix some information regarding the preparation of these drugs elsewhere, which may be shortly noted. Ganja is prepared, he says, by burying the flower heads in a pit four or five feet deep coated with goats' dung. The pit is filled in for fifteen or twenty days, after which the ganja is taken out and sold. The consumer picks off the smokable part, crushes it, heats it on a cinder, makes it into small lumps or cakes, and smokes it in a *huka*. Charas is collected by people walking to and fro through the bhang plants with greased leather coats on, and also by going clothed only in a loin cloth with their bodies smeared with oil. The latter process is followed, he

says, in the Native States of India. He also mentions a process resembling that noticed in the Punjab, by which the dust made by beating the plant is collected on cloth. He states that this process is peculiar to Afghanistan: "And the charas imported from there is well known for its pale green colour, and is highly appreciated."

Preparation of fibre.

260. It is interesting also to note that two or three witnesses, Mr. Giles being one, report the preparation of fibre from the hemp grown in Sind. Mr. Giles says: "Sometimes, but very rarely, the thick stalks of the plant are placed in water to rot, and with great labour rope or twine is made from them by individual persons for special purposes; but the plant is never grown for the use of its fibre or of its seed only." Witness (14) states that: "The bhang plant stalks are usually buried in soft wet mud for a few days instead of being soaked in water, as in the case of the *sihata* or the *ak*." The fibre production seems to be very limited in amount, but it is worth special notice because this is the only mention of its occurrence below the Himalayas in the evidence collected by the Commission.

Berar.

261. The official memorandum gives the following description of the preparation of ganja in Berar. It is very imperfect, and the process probably resembles closely that followed in the Deccan or Khandwa: "The small outer branches are stripped off and put in towards the centre of the plant, which is then pressed with the foot (to flatten the heads), made up into sheaves, and stacked in a shed under pressure, the heaps being opened and the sheaves moved now and then to prevent their getting too hot. The leaves fall off when the plants are tied into bundles. They are collected and called bhang. The bare stalks remain with the heads in them." One witness (23) mentions the preparation by burying, which has been mentioned elsewhere. Witnesses (10) and (9) say that the crop is trodden by bullocks, which seems very improbable. It is clear that the bhang locally prepared is simply the refuse from the manufacture of ganja.

Ajmere.

262. There is nothing to show that the plant in Ajmere is subjected to anything more than a process of drying to produce bhang.

Coorg.

263. From Coorg it is stated that the female plants are cut down and exposed to the sun for a day. They are then collected into bundles and exposed to the sun by day and dew by night for three days, after which they are wrapped up in coarse cloths or *kamblis*, and so preserved. It is to be remembered that the cultivation consists only of the surreptitious rearing of plants on a small scale.

Baluchistan.

264. There is no information from Baluchistan.

Burma.

265. There is no information that the ganja of the Shan country is prepared by any other process than drying. A specimen of Kachin ganja was forwarded to the Commission, and consisted of bundles of flower tops and leaves loosely rolled together. It looked like the produce of the wild plant.

266. The details of information describing the preparation of ganja in Mysore are limited to drying in the sun and tying into bundles. Mr. McDonnell's memorandum does not give a description of the Mysore practice. What he says about the Vellore and Cocanada samples agrees with what has been learnt from Mr. Benson's bulletin.

Mysore.

267. The Director of Agriculture and Commerce gives a description of the preparation of ganja which does not differ from the method pursued in the Bombay Deccan. Bhang is the leaf and other litter which falls away in the manufacture of ganja.

Hyderabad.

268. Such cultivation as exists in Rajputana, both regular and scattered, seems to be chiefly directed to the production of bhang. Jhallawar, however, reports a production of 165 maunds of ganja, and some of the superior drug appears to be turned out in Serohi also. An inferior sort, called *makuria* ganja, is spoken of in Marwar, but appears to be little better than the female flowers of a bhang crop of the ordinary kind. It is stated in the Jaisalmir report that the ganja produced there is never prepared by treading, and from other places that the drug, whatever it may be, undergoes no process but drying. One informant states that charas is supposed to be prepared chiefly by the Bhils in Jodhpur. No foundation for this statement can be discovered. Fakirs may rub the heads of the plants they have grown in their lands and get a little charas occasionally; but even that seems improbable, as it requires a great deal of flower head to make a reasonable quantity of charas.

Rajputana.

269. Mr. Gunion's memorandum furnishes an account of the manufacture of ganja in Indore and Dewas. The processes comprise the same three principal features as elsewhere, *viz.*, drying, kneading with the feet, and removal of leaf. They occupy three or four days. In Indore the manufactured produce is kept under pressure till sold. From the description of the preparation of bhang in these States, it would seem that it is made from a crop grown for seed or bhang and not from the ganja crop. The plants are bodily dried and threshed, and the seeds are separated from "the crushed leaves and tender twigs, which are called bhang." It seems that "no charas is prepared in Central India except a little in the Bhopawar Agency for the personal use of the cultivators, or for presents from them to religious mendicants." The method of preparation is thus described by the Political Agent of Bhopawar: "Charas is prepared by rubbing ganja (sometimes mixed with bhang) violently for several hours on rough woollen blankets, which afterwards are scraped with a knife. The substance thus scraped off is first class charas. An inferior kind is then obtained by washing the blanket with the least possible amount of water, and then evaporating the liquid." The report of Gopal Ram at the close of the North-Western Provinces memorandum contains no information of special interest regarding the preparation of the drugs in Gwalior except that relating to charas as a bye-product of ganja cultivation.

Central India.

"A certain amount of charas is obtained in this (Gwalior) State by scraping off the resin which adheres to the hands in cutting the ganja plant. In tahsil Antri cultivators do not care much about the charas. In tahsil Kolarus, district Narwar, I hear charas is obtained in small quantities by the same process as in Kumaon and Garhwal."

270. Bhang alone is prepared in the Baroda State. It is of the same kind and prepared by the same processes as are found in the Gujarat Division of the Bombay Presidency.

Baroda.

271. The Governor of Jammu reports that neither ganja nor charas are made there, but only bhang. The Governor of Kashmir gives an account in which the names of the three drugs are confused. He says first: "Almost all wild hemp, which is called *talia* in the Punjab, and is generally female plant in the above-mentioned tahsils, is used for the preparation of ganja locally known by name *gard* bhang (*chura* charas)." And further on—"The leaves of the hemp plant are trodden under foot, and cleaned by sieves to prepare *gard* bhang, and the process is continued until the leaves are reduced to powder and seed separated."

Kashmir.

This describes the preparation of bhang, pure and simple; but apparently this article is known by the three names—ganja, *gard* bhang, or *chura* charas. And "it would appear that this is the stuff which is occasionally smoked. Fakirs and a few Muhammadans and Pandits of the Srinagar city and towns smoke *gard* bhang (*chura* charas)..... The total number of persons who do smoke ganja is, etc". Another informant says: "Charas is prepared in the capital cities and is termed *garda*," and he does not know if bhang is prepared. The preparation of *garda* is described, and finishes with the reduction of the material to a "resinous powder." The manufacture of *garda* or charas by the method given in the "Punjab Products" is not described by either of the only three informants. It is probable that charas is made by a further elaboration from the *garda* charas spoken of above, which is practically bhang powdered to a state of more than common fineness, and that ganja is a name borrowed from India without any correct idea of its meaning beyond that it signifies the female plant. It may be noted that the price of *garda* bhang, three pice per tola, given in the Governor of Kashmir's report, is very high for simple bhang, and seems to indicate that the article is more like charas.

272. The manner of preparing ganja in Nepal is somewhat peculiar. The Darbar answers report that "when the plant is in the *lata* state, it is cut down and kept in the dew for about a week, and after that each *lata* is separately wrapped in a piece of fine plantain bark, and, being tightly tied with string, is put by. Some people flatten it by pressing it under a piece of *tát* (gunny). Two or three days after this it becomes fit for use." The manufacture of charas is thus described: "The ganja plant exudes a thin gummy water. That plant is squeezed between the palms of both hands, and the gummy substance which sticks to the hands is scraped into a vessel, and is called charas." Nepal ganja, Mr. Stoker states, is introduced in small quantity into the North-Western Provinces. Nepal charas is, on the same authority, of superior quality, though the Darbar answers say that Yarkand charas is preferred in Nepal. The Deputy Commissioner of Bahraich in the report attached to Mr. Stoker's memorandum states that the export of charas from Nipalganj is about 50 maunds, and that some years ago a very much larger quantity was imported into British territory. The latter statement is confirmed by evidence from Bengal, which shows that Nepal charas is now almost superseded by the drug which comes

Nepal.

through the Punjab. Mr. Stoker reports that some of it passes into British Kumaon and Garhwal.

Summary.

273. It will be seen from the above detailed description that bhang, whether produced by the cultivated or wild plant, is prepared by simple drying. The processes by which ganja is prepared consist of pressing, drying, and removal of leaf. The manufacture is most perfect in Bengal. In other provinces it is not characterized by the same degree of care, and one or other of the three essential features of the manufacture is more or less neglected. Ganja collected from the wild plant and from the bhang crops of Sind, and probably also that yielded by stray cultivation, is simply dried. There are only two methods of preparing charas which appear to be used when the drug is produced on any considerable scale, *viz.*, that by rubbing the flower heads with the hands as in Kumaon and Nepal, and that described as being practised in Yarkand, which may be called the *garda* method, and consists in beating the plant over cloth, and manipulating the dust that is thus deposited. The collection of the resin adhering to hands and implements in the course of harvesting ganja is worth remembering, for it is proved in Gwalior and Bombay. The practice of the Malwa Bhils is perhaps established. Other methods are unimportant, and the common report that charas is collected by men dressed in leather moving about in the hemp crops has not been definitely located. It is doubtful if this device is employed anywhere in India.

The results of the analyses of various samples of the drugs, which have been prepared at the request of the Commission, are shown in Vol. III Appendices.

Deterioration of hemp drugs.

274. Regarding the question whether hemp drugs deteriorate or not by keeping, the Commission, for reasons which will be explained later, are unable to state definitely the precise period for which the drugs will retain unimpaired their full narcotic power under ordinary conditions of storage. A large number of witnesses have tendered evidence relative to the question whether hemp drugs deteriorate or not by keeping. The general tenor of the evidence is to the effect that the fresher the drugs, the better. Regarding ganja, Mr. K. G. Gupta, Excise Commissioner, Bengal, states that the drug is "much valued during the first year; less so in two years—in fact, is not sold after the first year if new ganja is available; absolutely unsaleable after two years." Two years may perhaps be assigned as the limit during which the drug is popularly believed to retain its narcotic properties without any very material impairment. Some witnesses, however, give a longer period. The retention of properties without deterioration of course very largely depends on the care exercised in storage.

Bhang being relatively far cheaper than the other hemp drugs, and owing to its being easily procurable for the mere plucking in a large number of districts, is probably not stored to the same extent as ganja. Mr. Gupta appears to place the limit for retention of properties between three and four years; and he makes an interesting remark to the effect that the value of bhang as a *medicine* is enhanced by age. Salig Ram, Punjab Witness No. 88, a drug contractor, states that freshly cut bhang produces great heat and is very intoxicating, while in the third year its intoxicating properties are lessened, and it goes bad.

Regarding the keeping properties of charas, the information must necessarily be inexact, as it is an imported article, and it is practically impossible for the real age of any particular sample to be known. From its physical properties charas admits of being readily adulterated, and the strikingly marked differences in the physiological value of charas resin as determined by Dr. Evans would also appear to support this view. From the various modes which appear to be adopted for the preparation of commercial charas, it must always be a drug of more or less uncertain composition, and not undeserving of the appellation—"A foul and crude drug, the use of which is properly excluded from civilized medicine," which was applied to it by the famous pharmacologists Flückiger and Hanbury. Some witnesses appear to consider that charas is perhaps more stable than ganja. Gujar Mal, Punjab Witness No. 93, a drug vendor for twenty years, states that charas is very strong during the first year; after that it gradually loses its strength until the fourth year, when it becomes quite useless. Some witnesses refer to the deterioration being more rapid in the plains than at hill stations. A witness refers to charas produced in Bokhara which can be kept for six years in India without going bad.

Causes of deterioration.

275. The causes of the deterioration of ganja and bhang are usually ascribed to (*a*) damp and natural decay; (*b*) ravages of insects, and also popularly (*c*) to volatilization of the narcotic principle. Regarding the two first causes of deterioration, they are common to all vegetable substances; but the third cause is not tenable because hemp resin on which the narcotic property of the drug depends is non-volatile. There is no doubt, however, that by prolonged exposure to air the aroma of the drug is dissipated to a considerable extent, the aroma being due to the presence of a volatile oil. The popular view of the value of ganja is based on its physical appearance, and very largely also on its aroma; but it does not necessarily follow that because the aroma has been lost, the drug is therefore weaker in narcotic property; but it may be less pleasant to smoke than ganja which has retained its bouquet. The mere effluxion of time without other disturbing factors, such as damp, as a cause of the impairment in the narcotic value of the drug is a point of some interest. In medical circles there is a fairly general idea that the extract of *Cannabis indica* is an uncertain drug, and this is believed to be due to variations in age of the preparations which have been prescribed. This assumption may or may not be correct. Dr. Evans' experiments indicate that the physiological values of similar doses of all alcoholic resinous extracts from various ganjas are not the same, and, moreover, individual idiosyncrasy on the part of the patients as influencing the action of the drug has perhaps not been always recollected. The alleged diminution in power of the drug by effluxion of time might be ascribed as being really due to a slow oxidation process, and that this might readily occur in ganja is explicable. But as regards the extract of *Cannabis indica*, direct oxidation would only occur superficially in the stratum exposed to air. But there is no evidence of any value to prove that ganja, which has been carefully protected from damp, and say five years old, is not as active physiologically as the fresh drug. The value of ganja for use has always hitherto been determined solely by its physical appearances. With evidence of mould and the effects of continued damp, the physical appearances are sufficient for an opinion to be arrived at; but when those signs of deterioration are absent, mere loss of aroma,

as has been already mentioned, is not necessarily evidence that the drug has undergone diminution in narcotic power. Further, there is no scientific evidence that any oxidation or other changes ever occur in alcoholic extracts of hemp by which the physiological value of the drug could be diminished. While fully admitting the possibility of oxidation altering the physiological activity of the drug, there is also the possibility—if the drug does diminish in strength by keeping—of the same change being caused by a mere molecular alteration in the constitution of the resin. But against the idea that any change does occur in physiological strength by keeping, there is the probability that different samples of the extract of *Cannabis indica* have been used by various observers; there is the individual idiosyncrasy factor, and Sigmund's dictum that the older the preparation of *Cannabis indica* is, the stronger it is.

Rules regarding deterioration.

276. So far as the Commission have been able to ascertain, in two provinces only, Bengal and the Central Provinces, are there any rules regarding the destruction of ganja alleged to have become unfit for use. In Bengal the rule regarding stocks in the Ganja Mahal is to the effect that any ganja left unsold on the expiration of two years in the houses of the cultivators or in a public gola shall be destroyed. Regarding stocks in the warehouses of wholesale vendors, the rule is to destroy all ganja classified as unfit for use once a year, the request of the goladar to classify any ganja as unfit for use being ordinarily accepted (Excise Manual, Section XX, clauses 22 and 54). In the Central Provinces rules for the management of the Khandwa ganja storehouse, rule 11, dealing with deposit of ganja in the store, enjoins that, if any ganja deposited in the storehouse be at any time condemned by the Deputy Commissioner as unfit for use, it shall be liable to be destroyed under the orders of the Deputy Commissioner, with the previous approval of the Commissioner of Excise. There can be no doubt that in the plains the preservation of ganja from deterioration by damp is a matter of very considerable practical difficulty. The loose manner of packing the drug, which leaves a large surface exposed to the action of damp, and the generally inefficient arrangements for storing it, make the difficulty very great. The general absence of special precautions for the protection of the drug may well lead to such general deterioration as quite adequately to explain the prevailing popular opinion and to justify the rules in force on the subject.

Dr. Prain's experiments in packing.

277. From Dr. Prain's report on the cultivation of ganja, the Commission learn that certain experiments are in progress connected with the packing of ganja in hermetically sealed tins. From a communication received from Dr. Prain, the Commission understand that certain of the experiments have proved a failure so far as the physical appearance of the drug is concerned. The Commission have been informed that in the Central Provinces a few years ago similar experiments were instituted with equally unsatisfactory results. Ganja contains a very appreciable amount of moisture, and it is well known that vegetable substances, such as leaves, etc., unless first desiccated before being packed in hermetically sealed vessels, invariably undergo marked deterioration. Dr. Prain's suggestion to have the drug compressed in the form of cakes commends itself as being simple and a very marked improvement on the present method of placing the drug in the market in several forms. It is recognized that powerfully compressing vegetable drugs

in the form of tabloids lessens deterioration by exposing a smaller surface to the action of damp and air. The proposed system would also lessen very materially the bulk to be stored and facilitate transport. It would most certainly prevent to a great extent volatilization of the essential oil on which so much of the popular commercial value of the drug depends, and it would also to a great extent prevent the illicit drug from passing into the market.

CHAPTER VII.

TRADE AND MOVEMENT OF THE HEMP DRUGS.

Bengal.

278. The area cultivated in the Ganja Mahal in the year 1892-93 was much greater than in any one of the preceding 19 years, being 3,540 bighas (Excise Commissioner's Memorandum), equivalent to 1,180 acres. But the estimated outturn of the crop was comparatively small, being only 7,575 maunds, and not much above the average of the five years from 1888-89 to 1892-93, 7,317 maunds (Excise Report for 1892-93, page 36). For the purpose of examining the movements of the produce, therefore, 1892-93 is a fair average year.

Exports of ganja.

279. Bengal exports ganja by land to Assam, Kuch Behar, Nepal, and the North-Western Provinces, and by sea to London, British Indian ports, and places outside India. The figures for 1892-93 are—

	Maunds.
To Assam	681
Kuch Behar	89
Nepal	177
North-Western Provinces	563
London	128
British Indian ports	275
Foreign ports	89
Total ...	2,002

None of these figures is in a very striking degree abnormal. The exports to Assam and Kuch Behar are taken direct from the head-quarters at Naogaon, and the rest apparently from the local stores most convenient to the trade. The balance left for home consumption is 5,573 maunds, which approximates to the annual consumption. One of the most noticeable points in the information relating to exports is the extraordinary shipment of 774 maunds in the year 1891-92 to other parts than those for which the Commission asked for information by name in the statement. This export was ten times the ordinary quantity, and no explanation is furnished about it.

Exports of ganja to North-Western Provinces.

280. The history of the export trade to the North-Western Provinces is also remarkable. It is sketched at page 38 of the Excise Report for 1892-93. It is there stated that the ganja trade of Rajshahi with the North-Western Provinces dates from the very earliest period of the cultivation, and that the export was very large till the year 1860, when the rate of duty was first increased. "The order requiring payment of duty at Rajshahi may be said to have killed the trade of that district with the North-Western Provinces. The exports which in 1854-55 amounted to 6,036 maunds, and to 4,250 maunds in 1861-62, fell in the following year to 1,014 maunds, to 43 maunds in 1863-64, and ceased altogether in 1869-70." The North-Western Provinces traders have since imported a certain amount of ganja from the golas of the Patna Division, and it is probable that by this arrangement they save in carriage something more than the difference between the cost of the drug at the central and local golas. Their average total purchases for the last three years, *viz.*, 565 maunds, are, however,

very far below the quantity they used to buy in Rajshahi, and it is clear that the North-Western Provinces have found other sources of supply to meet their wants.

Imports of ganja.

281. A certain amount of ganja is imported under license from the Tributary States of Orissa, but the Commissioner of Excise reports that the quantity is not large, as little advantage has yet been taken of the rules passed in March 1892 to legalize the import. For the previous decade the importation had been entirely forbidden under orders of the 21st June 1882. Smuggling from the States is, however, carried on on a considerable scale. This and a small amount of illicit import over the Nepal frontier are practically the only sources of the ganja supply of the province besides the produce of the Ganja Mahal and such material for smoking as the wild growth and illicit cultivation provide. It may be noted that in the year 1878-79 a small amount of ganja was imported from Bombay and the Central Provinces. The experiment has not been repeated.

Bhang and charas.

282. The Excise Commissioner reports that bhang is not as a rule imported from any other province, and no figures are furnished. But the Excise Commissioner, North-Western Provinces, states that a certain amount does pass from his province into Bengal, and there is general corroboration of this statement in the evidence. Charas is imported from the Punjab. Formerly, it seems Nepal charas was generally consumed, but it never could have been largely imported, for the total import for the year 1880-81 was less than half a maund. The trade in charas seems now to be steadily growing. A duty of Rs. 8 a sér has been levied on the drug since 1880, and the import is now 11½ maunds.

Kuch Behar.

283. The Kuch Behar State imported 89 maunds of ganja in the year 1892-93. Though somewhat higher than that of the three preceding years, the figure is not abnormal. It exports none of the hemp drugs, and none are licitly produced.

The Tributary States of Orissa.

284. Though the Bengal Government has passed regulations under which the drugs can be exported from the Garhjat States, and though there is considerable demand for them, there is practically no licit trade. The illegal traffic is considerable, but its volume cannot be estimated. Within the States the consumers appear to grow their own drugs, and there is no organised trade.

Political States of Chota Nagpur.

285. There is no trade worth mention in the Chota Nagpur States. All the States probably import ganja to a certain extent, for cultivation has been more or less restricted in all of them; but there is definite information to this effect from Seraikela and Kharsawan alone. The former State has furnished statistics in the form prescribed by the Commission showing an import of 1½ maunds of ganja. It is nevertheless probable that many consumers grow their own drugs. There are no exports of the drugs except perhaps in the shape of very petty smuggling.

Hill Tippera.

286. There is no trade in the drugs in Hill Tippera. An insignificant amount is imported for consumption, and there is some petty smuggling into British territory towards Bengal and Assam.

287. Assam draws its ganja supply from Rajshahi. The figures of import are given from 1879-80 to 1892-93. The average import of the first four years of this period was 644 maunds, of the next five years 677 maunds, and of the last five years 750 maunds. The trade therefore is growing, and the increase is doubtless connected with the development of the tea industry in Assam and the influx of coolies attending it. The drug is not exported. There is reason to suppose that the consumption of licit ganja, and therefore the import trade, is affected by the smuggling of inferior ganja from the hill countries and by the existence in the valleys of the wild growth in considerable abundance; but it is not possible to form any estimate of the extent of this interference with the legitimate business. Charas is not consumed. Licenses are not issued for the import of bhang probably because there is no demand for Bengal bhang, the local weed being far more than sufficient for the needs of the province. Nor is there any local trade in bhang. Practically bhang is not recognized as a distinct article from ganja. There is very little information about its use.

Assam.

288. The province produces for itself a large amount of bhang and a very small amount of ganja and charas. A considerable quantity of bhang is nevertheless imported, and practically the whole of the ganja and charas consumed are from outside the province. All three drugs also pass out of the province, but ganja and charas only to a small extent.

North-Western Provinces.

289. Mr. Stoker writes that the three main localities from which ganja is imported are Bengal, Khandwa, and Central India, *i.e.*, (*a*) Gwalior, and (*b*) Bundelkhand Native States. The Bengal Excise Report for 1892-93 shows that the export from Bengal to the North-Western Provinces in the last three years has been—

Ganja imports.

	Maunds.	Average maunds.
1890-91	667	
1891-92	467	565
1892-93	563	

It is nearly all brought from the golas in the Patna Division. The imports from Khandwa (Excise Memorandum) were—

	Maunds.	Average maunds.
1890-91	1,530	1,490
1891-92	1,450	

These figures together account for an average import of 2,055 maunds. The total imports of the province were—

	Maunds.	Average maunds.
1890-91	4,920	
1891-92	4,239	4,774
1892-93	5,165	

or more than double the quantity which is drawn from Bengal and Khandwa.

The Bengal drug, *baluchar*, is universally admitted to be of superior quality. Mr. Stoker writes: "The appearance would indicate that it contains more of the resinous secretion ; but, so far as I know, it seems to be preferred on account of its flavour and less unpleasant after effects." It was exported to the North-Western Provinces in 1854-55 to the amount of 6,036 maunds, and in 1861-62 of 4,250 maunds, and then the export rapidly decreased to the present average on account of the heavy duty imposed by the Bengal Government. These figures appear to show that the North-Western Provinces formerly drew its whole supply of ganja, or nearly all, from Bengal, and that the imports of ganja given in the statistical return are not in excess of the annual supply which the province requires. It is advisable to draw attention to these figures because Mr. Stoker cautions the Commission against placing too much reliance on his statistics.

Gwalior the principal source of supply of ganja.

290. Taking the average import then at 4,774 maunds—Mr. Stoker estimates it at 4,000 to 4,500 maunds—it must be concluded that 2,719 maunds, or the greater part of it, are imported from Gwalior and the Bundelkhand States. The Bundelkhand States named by Mr. Stoker are Dattia, Sampthar, Chatarpur, and Kadaura (Baoni), to which he would add Dholpur in the Bhartpur Agency. He is not sure that all the ganja brought from these States is of local growth. Some of it, he suspects, comes from Gwalior or Khandwa originally. From other sources it is ascertained that Dholpur does not grow any ganja. Regarding the volume of the import for the Bundelkhand States, Mr. Stoker writes that it is inconsiderable and irregular. Gwalior must therefore be the locality from which nearly the whole of the balance of import now under consideration is derived. And in this view it becomes the most considerable source of the ganja supply of the province, larger than Khandwa, and far larger than Bengal. It is reported that a little ganja still comes from Indore. It is to be noted that in certain years the Khandwa imports have been uncommonly large. In 1883-84 they were 2,472 maunds, in 1885-86 4,223 maunds, and in 1889-90 3,237 maunds. These figures, of course, raise the importance of Khandwa as compared with Gwalior, but still they do not affect the conclusion that the latter provides the greater amount of ganja to the North-Western Provinces at the present day. Mr. Stoker thinks Gwalior ganja is gaining ground, and that it has been favoured by the construction of the Indian Midland Railway.

Khandwa and Gwalior ganja inferior to that of Bengal.

291. As regards quality, Mr. Stoker's information places Gwalior ganja on the same footing as the *pathar* of Khandwa, and it is known by the same name. Both these drugs are far cheaper than that of Bengal with its high duty, and this appears to be a sufficient reason for their having superseded it. In the retail trade *pathar* sells at 1½ annas, while *baluchar* sells at 6 annas the tola. There is reason to believe that *pathar* is frequently passed off as the better quality of drug, and is used also for adulterating it. The form in which the drug is sold in the shops, the smokable part being picked off the stems, renders such practices possible. The two articles are readily distinguishable on the branch. Mr. Stoker has some interesting remarks on attempts which have been made, apparently with more or less success, to get the cultivators of Nimar to turn out their drug so as to resemble *baluchar*. The latter is consumed principally in the districts of the Gorakhpur and Benares Divisions, but a little of it still finds its way further west, where its superior quality secures for it a certain, though small,

demand in spite of its much higher price. The name *pathar*, *pathiyara*, or *pathiyala* may possibly be derived, Mr. Stoker thinks, from the leafy character of the inferior drug.

Other sources of ganja supply.

292. It is mentioned that within the last ten years ganja has been imported from Holkar's Territory, Berar, Mewar, Nasik, Nasirabad, and Khandesh, and perhaps other places in the Bombay Presidency; but latterly "the proximity of Khandwa and Gwalior, and the cheapness of the drug there, seem to have given them a monopoly of the business in *pathar*." The smuggling of inferior ganja from over the Nepal frontier is too insignificant to interfere with the trade. The registered exports are not considerable; some imported ganja goes from Bahraich into Nepal.

Import of charas.

293. The charas used in the North-Western Provinces is almost wholly the produce of Yarkand and Bokhara obtained through the Punjab. Nepal also supplies from 25 to 50 maunds. The total import is given as 2,251 maunds. This is far in excess of any previous record, but Mr. Stoker advises caution against placing too great reliance on these statistics, and states that he has only recently established a system of registration which can be expected to give at all accurate results. The figure is probably unduly enhanced by the partial registration of transports within the province. In such registration the district exports must have failed to appear, for the total export of the year is only given at 45 maunds. In the correspondence of 1881 the Board of Revenue estimated the consumption at only 1,000 maunds, and it cannot be supposed that it has doubled since that time. Mr. Stoker's estimate of the imports, *viz.*, 1,100 or 1,200 maunds, may be adopted. Some interesting information is furnished in a letter of the British Joint Commissioner of Ladakh which appears in the correspondence of 1881. That officer states that the charas which comes into India by the Ladakh road is produced in Eastern Turkestan, *viz.*, Yarkand, Yengi Hissar, Kashgar, Khotan, etc. This is regarded as inferior to the charas of Bokhara, which is carried through Kabul to Peshawar, and through Kandahar (in ordinary times) to Shikarpur in Sind. The charas of Yengi Hissar, which is the best of the kinds produced in Eastern Turkestan, is frequently sent through Khokand to Bokhara, and thence imported with Bokhara charas, and sold under that name. The great bulk of the charas sent through Ladakh to India is consigned to Amritsar. Amritsar is the chief depôt of charas, and the North-Western Provinces supply would seem to be drawn from that place. The traders have informed Mr. Stoker that the drug is much less pure than it used to be some years ago, and also much cheaper. The *Sháhjahani* or *Saljahání* charas from Nepal is of very superior quality, and commands as high a price as Rs. 10 a sér. It seems all to go to Lucknow, where it is retailed at Rs. 35 to Rs. 40 per sér. The import has fallen off in late years in consequence of Yarkand charas having become cheaper, but its superior quality still secures a market for it.

Charas produced in the Himalayas.

294. Charas is manufactured to the extent of about 50 maunds in the mountains of Kumaon and Garhwal from the crops cultivated for fibre. It is for the most part consumed locally, but 5 or 6 maunds pass annually into the hands of the contractors. It would appear that a small amount is exported to Tibet. This

district also receives small imports from Tibet and Nepal. It is said that the people prefer Yarkand charas to their own, and Mr. Stoker cannot understand in what, except cheapness, the superiority of the latter can consist, for the home produce must be far the purer of the two. Some charas is prepared from the wild growth, but it is doubtful if it enters the market. It may, however, affect the trade by satisfying the wants of a certain class of consumers. There is still another source of charas in the province, though it is not yet drawn upon except by the hillmen who come down to cultivate in the Kumaon Terai and the Bhabar. The wild growth of this region is made to yield the drug of which Mr. Stoker had succeeded in getting a specimen. The quantity made and used is quite insignificant, and does not appear to find its way into the market; but the possibility of preparing the drug from the wild growth of the low country is interesting.

Export of charas.

295. The export of charas is only 45 maunds. It probably passes into Bengal and the Native States on the southern frontier; but there is no definite information. The figure may not mean exports from the province, but it is reasonable to expect that there should be a little trade in the directions indicated.

Import and export of bhang.

296. The imports and exports of bhang are given as 1,644 and 1,263 maunds respectively. It may be doubted if these figures have any value at all as representing the volume of trade over the frontiers of the province. The mass of the bhang trade of course circulates within the province, and consists in providing the locally grown drug to local consumers. Regarding the external trade, Mr. Stoker writes: "A certain amount is imported from the Punjab, coming chiefly from Jagadhri, Kalsia, and Umballa, and some from Amritsar and Hoshiarpur. Nearly all of it goes to a few of our western districts. This is not because of any failure in the local supply, which is unlimited and inexhaustible, nor because of any superiority of the Punjab article, but apparently on account of the trade connection of some of the contractors with the Punjab..... A little bhang also comes from Bhartpur and Jeypore, and perhaps from a few Bundelkhand Native States; but in that direction we give more than we get. The amount is not considerable, and seems to be diminishing. Some of the bhang from Gonda and Bahraich is really grown on the Nepal side of the border..... A certain amount of bhang finds its way out of the provinces to the neighbouring districts of Bengal, the Punjab, the Central Provinces, and the Bundelkhand States." It appears that the contractors often buy the plant from the owners or occupiers of land who have collected and stored it. The purchase money would seem to include a price for the drug itself as well as payment of the expenses connected with collecting and storing it.

Rampur.

297. There is no separate information regarding the trade arrangements of the Rampur State. They form part of the general trade of the province. The amount of the State's imports and exports cannot appreciably affect the course of the latter.

Tehri Garhwal.

298. The same remarks apply to the Hill State of Tehri Garhwal, with the addition of the definite information that none of the products of the hemp cultivation carried on in the State passes over its frontiers into British territory.

299. The comparatively unimportant subject of the bhang trade may be disposed of in a few words. The mass of the bhang consumed is collected within the province mostly from the wild growth. There is a considerable import from over the Kashmir frontier which, the Excise Commissioner remarks, may be regarded as local production, for the plant is collected at no great distance from the border. There is a small import from the direction of Kabul also. It has been seen that a certain quantity of bhang passes out into the North-Western Provinces. It is probable that the bhang produced from cultivation is mostly consumed at home, and that very little of it, if any, passes on to the market. The amount shown as sold by retail vendors approaches 4,000 maunds.

Punjab.

300. Nearly the whole of the charas supply of India comes through the Punjab. The Excise Commissioner estimates that in 1892-93 the total import amounted to 5,000 maunds; that this was an exceptional year, and that in ordinary years it is between 3,000 and 4,000 maunds. When examining the trade of the North-Western Provinces, information was quoted from the Joint Commissioner, Ladakh, about the kinds of charas which pass under the names of Bokhara and Yarkand, and the routes by which the two articles are imported into India. The Joint Commissioner, in this case Captain Ramsay, reported to the Financial Commissioner, Punjab, in August 1888, on the subject of the charas trade. In this report he writes: "Charas is produced chiefly in the vicinity of Yarkand. It grows at Bokhara and other places in Turkestan, but I have been informed that the Russians have prohibited its cultivation within their dominions, and that supplies of the drug are now obtained almost entirely from Yarkand territory. The finest charas does not find its way into Ladakh, but is exported to Bokhara and other places." He proceeds to give some interesting details of the trade: "The reported value of the charas is fictitious for this reason that the Yarkandis bring their charas to Leh, and there meet Indian traders who take their charas in exchange for piece-goods and other Indian articles. Each party over-values his goods, hence the reputed value of both charas and piece-goods, etc., is from 10 to 20 per cent. in excess of the real value." He then shows that the trade has a strong spice of gambling about it: "It will be observed that the fluctuations in the price of charas are very great, and this fact has led two of my predecessors and myself to express opinions hostile to the fostering of this particular branch of our Central Asian trade on the ground that all charas dealings partake rather of the nature of a gambling transaction than of legitimate trade. The price fixed for charas at Leh is almost entirely speculative. The charas is intended for sale in the Punjab, but none but license-holders are permitted to sell charas there; the consequence is that when merchants take their charas to the Punjab, they are obliged to sell it for such price as the license-holders will pay. The charas cannot be kept in India, as it goes bad after a year, and it cannot be taken back on account of the cost of transport. The down country license-holder is therefore in a position to fix the price of the drug. Nevertheless large profits are sometimes made on charas taken down for sale, and thus the trade continues to thrive." These remarks appear to be just, though it may not be correct to say that charas goes bad in quite so short a time as one year. The charas having arrived at Leh, and having apparently passed into the hands of Indian traders, is taken to the Punjab by two routes, *viâ* Kashmir and *viâ* Kulu.

Import of charas.

The ganja, *gard* bhang, or *chura* charas manufactured in Kashmir is all consumed locally; none is exported to the Punjab (Kashmir Governor's Memorandum). The Kashmir authorities take precautions to see that the Yarkand charas passes through with bulk unbroken, and they levy duty on any that may be sold in Srinagar. The import by this route may be roughly stated at 500 maunds. Six or seven times as much is imported direct through Kulu to Hoshiarpur, and during the last three years the amount has grown considerably. The figures for the last three years are—

	Maunds.
1890-91	2,201
1891-92	3,242
1892-93	3,932

The figures quoted by the Excise Commissioner from the Provincial Reports of external trade show that the Kabul route is also used for the import of charas, but no imports were apparently registered in 1890-91 and 1891-92. In discussing the value of these figures, the Excise Commissioner remarks that no drug is shewn as coming across the western frontier (from Sewestan) or the north-western (from Bajaur) except that from Kabul, while there is undoubtedly a certain amount of import trade with the Derajat and Hazara. This implies that to the west of the Kashmir route there are several roads from Hazara round to the Sind frontier by which charas enters the Punjab.

The figures of import and export given in the form prescribed by the Commission are obviously incorrect; the same drug must frequently have been registered more than once. The estimated import is 5,000 maunds. The registered consumption as shown in the statistical tables is 1,020 and 1,026 maunds for 1892-93 and 1891-92 respectively. But the figures seem to be merely the differences between the imports and exports, and cannot be otherwise verified. It would hardly be an excessive estimate to put the amount consumed in the province at 1,200 maunds. This leaves 3,800 maunds for export, of which, according to Mr. Stoker, the North-Western Provinces would take another 1,200 maunds. The balance, 2,600 maunds, must go in waste, and be exported to the rest of India. It must be remembered that the imports of charas in 1892-93 were exceptionally high, being 1,000 or 1,500 maunds above the normal. With this allowance the consumption by India outside the two northern provinces seems to come within limits which accord with the general information regarding the habits of the people. A not insignificant share must be taken by the Native States of the Punjab, where the charas habit is as prevalent as among the population of the British portion of the province.

Punjab States.

301. The following morsels of information regarding the Native States under the Punjab Government have been furnished. The State of Nabha prohibits the sale of ganja and charas, and only allows the sale of bhang for medicinal purposes. Faridkot imported in the last year 40 maunds of bhang and 12 maunds of charas. Jhind has imported on the average of two years 105 maunds of bhang and 52 maunds of charas from Umballa and Hoshiarpur. Chamba reports that it imports the hemp drug from Hoshiarpur and Amritsar, and that the average consumption of the whole year is about 8 maunds. There is a small import of Yarkand charas through

Bashahr. The distribution of the hemp drugs to the States would seem to be a subordinate incident of the Punjab trade.

Central Provinces.

302. The Central Provinces grow their own ganja, consume no charas, and import a trifling amount of bhang.

Quantity of ganja produced.

303. Mr. Drake-Brockman gives 16 maunds as the average outturn of an acre of ganja cultivation (Memorandum on Cultivation). Mr. Robertson puts it at 12 to 15 maunds (Memorandum on Cultivation). These estimates must take account of a great deal of material that does not find its way on to the books of the Khandwa depôt. For paragraph 54 of the Excise Memorandum gives figures which would put the outturn at hardly 10 maunds. The quantity of ganja brought to store and the quantity exported since 1888-89 are given in that paragraph as follows:—

	Quantity stored.	Quantity sold for export beyond Central Provinces.	Difference.
	Maunds.	Maunds.	Maunds.
1888-89	9,450	5,052	4,398
1889-90	10,854	7,933	2,921
1890-91	7,224	4,108	3,116
1891-92	6,685	3,916	2,769
1892-93	6,686	4,233	2,453
Total ...	40,899	25,242	15,657
Average ...	8,179	5,048	3,131

Mr. Drake-Brockman writes that only one-fifth of the crop is locally consumed, but this statement does not take account of waste. The average recorded consumption, including that of the Feudatory States, is shown to be 1,282 maunds. The column headed "difference" represents this provincial consumption, together with waste in cleaning, principally the drug consumed in the province, but also to a less degree that which is exported.

Export of ganja.

304. Of this export the North-Western Provinces take about 1,500 maunds, and the destination of the rest is indicated in a report of the Excise Commissioner of the year 1887 quoted at paragraph 41 of his memorandum: "The part played by the Khandwa store as an *entrepôt* for the supply of the ganja demand of these provinces is quite insignificant when compared with its use as a mart for the convenience of foreign purchasers. To it throng traders from Bhopal, Indore, Gwalior, Rutlam, Dhar, Jodhpur, Udaipur, Rewa, Panna, Baroda, and other States of less note, and licensed vendors from the North-Western Provinces compete with contractors from Berar for the purchase of the cultivator's stock." At that time the Commissioner of Excise states that the export was between 6,000 and 7,000 maunds. In making this calculation, he includes the figure of the year 1885-86, which reached the exceptional amount of 13,380 maunds.

There is reason to suppose that a little business is done in the sale of seed from the crops grown at Khandwa for that product. There is information as to

its being used by the hemp cultivators of Hyderabad, the Berars, Bombay, and Indore. There is some smuggling of ganja from the Native States on the borders of the province, but it does not seem to be considerable enough to materially affect the licensed trade. Bhang is imported from Central India to the extent of about 10 maunds for the use principally of Marwari traders. It is difficult to believe that the leaves of the hemp cultivated at Khandwa and the fragments from ganja manufacture do not pass into use as bhang; but there is no evidence that they do. The Excise Commissioner thinks that the high maximum (20 tolas) for legal possession of bhang affects the licensed import by enabling consumers who travel to bring in the drug for themselves. "Considerable quantities," he says, "are introduced by post also."

Feudatory States, Central Provinces.

305. The Feudatory States and some zamindaris administer their own excise. These are all under engagement to buy their ganja from British wholesale vendors. Their imports are steadily growing, and amounted in 1892-93 to 273 maunds (paragraph 66, Excise Memorandum). Khairagarh and Sonepur alone have sent reports, and they show that their imports are increasing, and are now over 20 maunds each. None of them apparently exports any ganja, though from the position of some of them on the frontier, and the presumably superior quality of Khandwa ganja over that of ganja yielded by ruder methods of cultivation, they might have been expected to do so. But the Native States and Madras zamindaris beyond the frontier all more or less grow their own ganja, and the Dewan of the Sonepur State says that the locally grown article is preferred. There may, however, be some petty export to the Chota Nagpur States, for the British authorities of that division have succeeded in restricting cultivation in them.

Madras.

306. The Excise memorandum and the statistics give no information about the imports and exports of ganja or the quantity produced in the Presidency. Of the other forms of the raw drugs, charas does not appear to be used, and bhang is but rarely recognised as a distinct article from ganja. Of these, therefore, nothing need be said in the present connection.

Probable amount of ganja produced.

307. In order to form an idea of the extent of the traffic in ganja, it is necessary to hazard an estimate of the outturn of the cultivation throughout the Presidency. The area has been estimated at 350 acres of regular cultivation, to which must be added the cultivation of the homestead and desultory kind. The Bengal Excise Report of 1892-93, page 36, gives the average outturn per bigha as $3\frac{1}{5}$ maunds, or something less than 10 maunds an acre. In the Central Provinces it appeared to be much the same figure. Mr. Benson, when giving evidence orally, said that the people of North Arcot and Kistna had both told him that the crop came out about 420 lbs., or $5\frac{1}{4}$ maunds to the acre, but he had not been able to test the statement. Except the fact that a higher outturn is got in the Ganja Mahal and at Khandwa, there is no apparent reason why this should be regarded as an unduly low estimate. For the reason stated, however, it may be raised to 6 maunds. And it will be proper to add one maund for the fragments from the manufacture which go to make bhang. The 350 acres of regular cultivation would at this rate, 7 maunds per acre, yield 2,450 maunds. The less systematic cultivation, accompanied by

probably less skilful manufacture, may perhaps be estimated to yield 2,000 maunds. The total outturn would thus be 4,450 maunds.

308. There is definite information of the following exports in 1892-93 :—

Exports of ganja.	Maunds.
To Mysore (average of three years, Mysore statistics) ...	540
To Bangalore (average of seven years, Bangalore Memorandum)	57
To Coorg (average of two years, Coorg Memorandum and Statistics)	21
By sea (Government report)	58
Total ...	676

leaving a balance of 3,774 maunds. There is probably some licit importation into Hyderabad from the Northern Sircars, though it would appear from the Hyderabad evidence to be small ; and a certain amount of smuggling not only into Hyderabad, but also to Orissa, the Central Provinces, and Burma. Mysore probably gets some illegal addition to its registered imports. The amount left for consumption in the Presidency and the Native States subordinate to it can hardly exceed 3,500 maunds. And it must be remarked that in the case of Madras ganja, there is not less waste than in the Khandwa drug as far as the Commission can judge. The consumers, therefore, do not probably get a larger share of this produce for actual use than the consumers of the Central Provinces do of the portion of their produce which stays at home. The export to Burma, there is reason to believe, is considerable. The Commission were informed in Burma that the drug came in considerable quantity from Pondicherry and ports on the Madras coast. All this export would appear to be Madras ganja.

309. Travancore and Pudukottai appear to import their hemp drug. In Travancore the cultivation is prohibited, except possibly in the wildest of the hill tracts, and it does not appear that there is any regular cultivation in Pudukottai. The consumption of the latter State is about $7\frac{1}{2}$ maunds, which probably represents the average import. It is estimated that the share of the rent of the opium and bhang farm of the State creditable to the hemp drug is Rs. 5,000, while the revenue of Pudukottai is Rs. 260. The Government of the latter State seems to undertake a more direct and detailed management of its hemp excise than the former does, and probably therefore gets a higher rate of revenue upon it. The consumption or import of Travancore is therefore probably less than would be indicated by a calculation based on a comparison of the revenue of the two States. It may be estimated at about 100 maunds. The State of Banganapalle is reported to cultivate 2·2 acres, and produce therefrom 320 maunds of ganja valued at Rs. 800. The outturn is impossible. Either the State imports a considerable amount of ganja, or its cultivation is much more extensive than reported. The revenue of the Sondur State from the farm of ganja, opium, and snuff is Rs. 31, and there can be no trade in the hemp drug worth mention.

Madras States.

310. The Collector of Ahmednagar states that the outturn of ganja cultivation is $4\frac{1}{2}$ to $7\frac{1}{2}$ maunds per acre according to soil and season. Of two Satara witnesses, one puts the outturn at $6\frac{1}{2}$ maunds, and the other at 8 maunds. A fair average

Bombay.

Probable amount of ganja produced.

of these figures is 6½ maunds. On the average of the last five years, the cultivation of the Deccan and Southern Maratha Country, including the Native States, is about 1,100 acres, which at the above rate would yield 7,150 maunds of ganja. The cultivation in the other parts of the Presidency proper is insignificant, and yields only bhang. The whole of the Presidency, including Cutch, Kathiawar, and the other Political Agencies, draws its ganja supply from the Deccan. Baroda also comes to the same market, and so do Sind and Aden.

Statistics of sale unreliable. Estimate of consumption.

311. The registered retail sale of the British districts (excluding Sind) is on the five years average 2,120 maunds. This ought to be near the amount of actual consumption, for imports of ganja are compared with the passes on arrival of consignments at the district head-quarters, the taluka, or the village, and the accounts of the retail vendors and their stocks are inspected from time to time by the District and Abkari Officers (Excise Memorandum, paragraph 8). The Commissioner of Customs, Salt, Opium, and Abkari states also (paragraph 14, Excise Memorandum) that the reports from all districts are unanimous that smuggling of these drugs is to all intents and purposes unknown, and he explains why it should not be worth the people's while to engage in illicit practices. But unfortunately it is found on examining the district figures that the provincial total is got simply by adding them up, and that in no less than nine districts there is no registered sale whatever in the year 1892-93. Large districts like Dharwar and Satara are thus imperfectly represented, and the average is falsified by the fact that in other districts the figures for the full quinquennium are not brought into the account. The actual average consumption is evidently very much in excess of 2,120 maunds. Another large addition must be made to the recorded sale on account of the waste which accompanies the handling and distribution of the less highly manufactured ganja found outside Bengal. With these corrections the consumption of British districts alone will account for not less than 3,000 maunds of the total production.

Ganja supplied to Native States.

312. A few States and some of the Agencies have sent figures of imports and consumption which exceed a total of 1,000 maunds. Only one State of Kathiawar is represented in this list—Junagadh. The important State of Kolhapur has no statistics to give. Baroda also would appear to import Deccan ganja to the amount of about 400 maunds. The consumption of all the Native States which import Bombay ganja cannot be much less than double the amount which has been reported.

Transport and import of ganja.

313. In British territory the district contractors, and sometimes the holders of smaller farms (Excise Memoramdum, paragraph 8), import on their own account from the places of production. These are all retail vendors. There is only one merchant in the Kolaba district who engages on the wholesale business, and probably the supplies for Sind and other places on the sea board pass through his hands. The farmer for the Bombay district appears to import for himself. It would appear from the Excise memorandum that some ganja is imported from the Central Provinces. It seems to be brought into Khandesh, but there is no evidence that it goes beyond that district. Some may possibly go as far as Nasik. But both in Khandesh and Nasik the cultivation is almost sufficient to

supply the demand of those districts. The import from the Central Provinces cannot be large.

Exports by sea.

314. It will be seen from the following statement that there is a considerable export of ganja by sea. Something less than one-half of the whole goes to British Indian ports, several of which are probably in the Bombay Presidency. A little more than a quarter finds its way to foreign Indian ports, which would include those of Cutch and Kathiawar. There is not, however, any definite information of the Indian ports, British and foreign, to which the drug is carried. As much of the drug as is imported into the Presidency and its Native States has, of course, been included in the above survey of import and consumption. About 28 per cent. goes to Aden, Arabia, Africa, and Europe. The export to London is very considerable. There is no reason to suppose that any of the sea export consists of other than Bombay ganja.

Export of ganja from ports in the Bombay Presidency for 1890-91 to 1892-93.

Year.	From what port.	To British Indian ports.	To Foreign Indian ports.	To Aden.	To Muscat.	To Zanzibar.	To London.	To Liverpool.	To Marseilles.	Total.	Remarks.
1890-91	Bombay	116	948¾	16	...	22	560	124½	...	1,787¼	The figures are Indian maunds.
	Other Bombay ports ...	1,202	16	...	...	...	...	...	...	1,218	
	Total ...	1,318	964¾	16	...	22	560	124½	...	3,005¼	Complete information for previous years not available.
1891-92	Bombay	126½	832	30	24	18	1,055	67	30	2,182½	
	Other Bombay ports ...	1,390	47	...	...	...	...	...	...	1,437	
	Total ...	1,516½	879	30	24	18	1,055	67	30	3,619½	
1892-93	Bombay	195	623	32	48	26	700	...	...	1,624	
	Other Bombay ports ...	1,345	147	...	...	...	...	...	...	1,492	
	Total ...	1,540	770	32	48	26	700	...	...	3,116	
	Total of 3 years ...	4,374½	2,613¾	78	72	66	2,315	191½	30	9,740¾	
	Average ...	1,458	871	26	24	22	771	63	10	3,246	

Distribution of ganja produced in the Presidency.

315. The result of this survey of the distribution of the ganja produced in the Bombay Presidency is as follows :—

	Maunds.
Consumed in British districts	3,000
Consumed in Native States	2,000
Exported by sea...	1,500
Unaccounted for	650
Total ...	7,150

316. Bhang occupies such a position in relation to ganja in the Bombay Presidency that it is hardly possible to examine the traffic in it separately. In the Northern Division the cultivation may yield 150 maunds, which would not be more than sufficient to supply the local demand. The bhang produced in Baroda, a very small amount, is not exported. The bhang which generally passes by that name consists of the fragments of leaves and flower head which come away in the manufacture of ganja. If figures had been complete and trustworthy, ganja and bhang might have been put together, and treated as one article of trade. It did not appear advisable to deal thus with a total consumption of only 44 maunds in the year 1892-93, a figure which a comparison with previous years shows to be incorrect. It does not appear that the sale of bhang as a distinct article from ganja exceeds 150 maunds a year in the whole Presidency, excluding Sind. The sale is only registered in the Northern Division and in Khandesh. Mr. Almon states that some of the Surat bhang finds its way to Bombay, and Mr. Campbell mentions import from Palanpur.

Bhang.

317. Charas is only used in Bombay City to the extent of 7 or 8 maunds a year. Seven sérs only were sold in Póona for the first time in 1892-93. The drug is imported from Amritsar and Hoshiarpur.

Charas.

318. The information is not complete enough to make it worth while to examine the individual trade of the Native States. The above general survey of the Presidency supplies the broad fact that all the States get their supply of ganja from the Bombay cultivation. The States in the extreme north of the Presidency, especially Palanpur, grow a little bhang for themselves, and this State may export some of its own growth to Bombay; but it cannot be much. Some of the southern States probably export part of the produce of the cultivation mentioned in Chapter IV.

Bombay States.

319. In Sind bhang takes the place of first importance among the three hemp drugs. Cultivation for the production of this drug amounts to 262 acres on the average of the last five years. The outturn calculated at something under 12 maunds an acre is 3,000 maunds. A high rate is adopted because the whole crop, except the actual sticks, goes into the product. The Excise Reports of 1891-92 and 1892-93 show the sources from which the various districts of Sind get their supplies of the drugs. All the districts, except the Upper Sind Frontier, would appear to consume locally grown bhang. The retail sale on the average of the last five years is 4,539 maunds, so the local production does not cover the consumption. But it is possible that this figure includes transport within the province. The Upper Sind Frontier district would appear to import the drug from the Punjab and Khelat. The statement regarding Khelat may be doubted, for there is very little cultivation there according to the information furnished to the Commission.

Sind.

320. The imports of ganja average 55 maunds, and the retail sale 22 maunds. It is mostly brought through Karachi from Panvel in the Kolaba district of the Bombay Presidency, where there is a wholesale business carried on in the ganja grown in the Deccan.

Import of ganja.

Some little may be imported from Cutch, but that also is in all probability the same ganja moving by a different route. The districts of Karachi and the Upper Sind Frontier would appear from the statistics to consume none of it, and Shikarpur very little; but the registration of the sale in Karachi is obviously imperfect. It was to be expected that the districts of Upper Sind should in respect to the consumption of ganja resemble the Punjab, where the drug is not smoked.

Import of charas.

321. The average import of charas is 70 maunds, and the registered retail sale 24 maunds. Amritsar seems to be the source of supply. Though the drug is said to be brought from Afghanistan, Yarkand, and Khorassan, there is no information of any direct import over the Sind Frontier on the west. The Karachi figures of retail sale are again wanting, and the drug would appear to be little used in Thar and Parkar. But the latter district appears to be more addicted to opium. The Acting Commissioner in Sind (Colonel Crawford) suspects some smuggling of charas and ganja from Jaisalmir through Thar and Parkar, and some illicit import of bhang from Khairpur into surrounding districts. Neither traffic appears to be at all extensive. In the last two years there has been a trifling export of 10 maunds of ganja by sea from Karachi.

Khairpur.

322. The Khairpur State grows 84 acres of bhang, which would yield about 1,000 maunds. The registered retail sale was three and four years ago 1,800 and 1,500 maunds; it is entered at 276 maunds for 1892-93. The figures cannot be correct. The statistics give no imports of ganja or charas, or any consumption of these drugs. Nor is there any record of export of bhang in the last three years. It is probable that some charas is used, but it may well be that ganja is but rarely smoked.

Berar.

323. The average area of cultivation in Berar is 60 acres, which by the Khandwa standard would yield something over 500 maunds of ganja. The imports, which come from Khandwa and some from Khandesh, are estimated at 800 maunds (Excise Memorandum). These supplies "are apparently sufficient for the requirements of the people who indulge in this drug." No exports are recorded, and it is stated that there are none. The cultivation in Khandesh has become so reduced that it is doubtful if any ganja comes from that district now. Charas does not appear to be used, and no sale of bhang distinct from ganja is recorded.

Ajmere.

324. The statistics of Ajmere give no figures of import, export, or retail sale. Very little of the hemp drugs is produced locally, and that only in the form of bhang. It is therefore safe to say there is no export. The Assistant Commissioner and Collector of Excise Revenue reports that ganja and charas are imported usually from the Punjab. This is probably true of charas, but the Punjab produces no ganja, and this drug must come from elsewhere, Gwalior being the most convenient, and therefore the most probable, source of supply.

Coorg.

325. In Coorg there is practically no local production of the hemp drugs. The average import of ganja from the figures of two years is 74 maunds of 28 lbs. each, or 21 Indian

maunds. The average of registered consumption is two-thirds of this amount. The drug imported would seem to be grown in the Madras Presidency. Charas is not used, nor is bhang regarded as a distinct article from ganja.

Baluchistan.

326. The information from Baluchistan does not enable the Commission to judge of the extent of the trade in the province. The farms in two divisions—Bolan and Quetta-Pishin—fetch over Rs. 4,000 each; but it is not clear that these do not include the right to sell other intoxicating drugs besides the hemp products. There is practically no local production of the drugs. It would appear that the consumption of bhang and ganja are about equal, and that of charas is twelve times as great as either.

Burma.

327. There is no legitimate trade in Burma. The smuggling which is carried on on a considerable scale will be dealt with more appropriately in connection with prohibition and excise arrangements. A few facts may be noted in this place. It appears from the information collected that the contraband article is introduced from ports on the Madras coasts, amongst which Pondicherry is prominently mentioned. The volume of the smuggling cannot be estimated. The Financial Commissioner reports the following detections:—

	1890-91.	1891-92.	1892-93.
	Tolas.	Tolas.	Tolas.
Rangoon	8,423	9,771	13,115
Moulmein	932	213	92
Akyab	245	567	1,018
Bassein	0	0	0
Total ...	9,600	10,551	14,225

And the Assistant Collector of Customs reports for 1893-94 (1st April to 30th November) tolas 30,353, or nearly 10 maunds. This is probably but a fraction of the total imports. The smuggling into Upper Burma from the Shan States and Kachin Hills is probably insignificant in quantity.

Mysore.

328. The figures of import and retail sale of ganja on the five years' average are respectively 400 and 300 maunds. The drug is brought principally from North Arcot. There is reason to think that some comes into the northern districts from Dharwar in the Bombay Presidency and from the Hyderabad State. There are no exports. Charas is not used, and bhang is not distinct from ganja. The latter remarks apply also to Bangalore, where the average import of ganja is 57 Indian maunds. This also comes from the Madras districts. There appear to be no exports.

Hyderabad.

329. The report of the Hyderabad State shows that "charas is almost unknown in the whole dominion." Bhang is a bye-product of ganja cultivation and manufacture. The

cultivation extends to between 300 and 400 acres. The Director of Agriculture states that the outturn may be taken to be 5 or 6 maunds per acre. The total produce of the State would then be about 2,000 maunds. The memorandum states that the local production is sufficient to meet the requirements of the people in ordinary seasons. It is only in abnormal years that exports to, or imports from, British territory take place. The average of these for the last five years is 75 maunds of import and 10 maunds of export.

Rajputana.

330. The Rajputana States appear to grow most of the bhang they require, and to import ganja and charas. The trade in charas is mostly in the hands of travelling Kabulis, called in these parts Vilayatis; but bhang and ganja are transported by the local traders of all grades, from Marwaris in a large way of business to Tambolis (*pan* sellers) and grocers. The following facts about the trade in some of the States are reported:—

Kotah.—A small quantity of bhang is locally produced. Ganja is imported from Jhallawar, Gwalior, and Tonk. No charas has been imported for some years.

Jhallawar.—About 140 maunds of ganja and 26 of bhang are said to be produced locally. About 90 maunds of bhang and ganja are imported and 105 maunds exported annually. The returns do not distinguish between the two drugs. There is no information about charas.

Jeypore.—It is reported that 10,000 maunds of bhang are produced locally. It looks as if the figure was a clerical error, for the export from the State is small, and the local consumption cannot be very enormous. This amount would represent 1,000 acres of cultivation, and the account of the cultivation does not justify the belief that there is anything approaching that area. Bhang of a superior kind is imported to the amount of 64 maunds; of ganja 54 maunds and of charas 129 maunds are brought in from the Punjab; 27 maunds of bhang are exported.

Kishengarh.—Ganja and bhang are locally produced to a small extent, but they are both also imported,—the former from Malwa, and the latter from Jeypore. Charas is also imported. Figures are not given. There are no exports.

Bikanir.—Some 13 maunds of bhang are produced locally, but no ganja or charas. The three drugs are all imported from the Punjab, Indore, and Jeypore. The bhang, which seems to come through Bhartpur, is called *thatia*, probably the same word as *tatia*, the name of the bhang produced in Farakhabad and Hardoi, derived, as Mr. Stoker explains, from a village of the name in the former district. Charas is of two kinds, Indori and Yarkandi; the former name would indicate manufacture in Indore, of which there is no decided proof. The only places in Central India where there is information of any manufacture of this drug are Gwalior and Bhopawar. The import of charas appears to be about 16 maunds and of ganja 4. It is possible that this ganja is what is known in the State as Indori charas; for the two drugs are mixed up in the accounts, and in one place it is stated that there is no import of ganja. Of bhang, 126 maunds are imported.

Kerowli.—The imports are small: ganja to the extent of 10 maunds from Gwalior, bhang to the extent of 2 maunds from Jeypore, and charas in very small quantity from the town of Bhartpur. A little ganja and bhang, 3 maunds of each, are exported. Bhang is locally produced in small quantity. The trade appears to be carried on at a fair which is held on the Shivratri.

Alwar.—The small quantity of bhang which is grown locally is almost sufficient for the wants of the State. It is supplemented by occasional import as required. Ganja is neither grown nor imported. There is an annual import of 6½ maunds of charas. There is no export of any of the drugs.

Dholpur.—There is no local production. Some 39 maunds of ganja are imported from Antri in Gwalior, half a maund of charas from Agra and Patiala, and 34 maunds of bhang from Kanauj, Chapra, Mhow, and Kerowli. Exports of 16 maunds ganja, 12 maunds bhang, and one quarter maund charas are shown.

Serohi.—The State imports 32 maunds of ganja, but no bhang or charas. There are no exports. It has been stated in a previous chapter that there is a certain amount of bhang and ganja produced in the State. The temples of Mahadeo draw revenue in kind from the hemp drug traffic, and there is probably a large consumption in connection with the holy places on Mount Abu.

Jaisalmir.—Ganja and bhang are locally produced to the extent of 33 maunds. There is no export or import.

Jodhpur.—Besides a small local production of ganja and bhang, the former drug is imported from Indore and the latter from Bhartpur. Charas is supplied by contractors in Ajmere. The imports are annually 49 maunds of bhang and 173 maunds of ganja and charas; the exports 5 maunds of bhang and one of ganja and charas.

Bundi.—The local production supplies only a small amount of bhang. The imports, especially of bhang, are extraordinarily high, and would seem to indicate that the State is more or less of an *entrepôt* of the trade. Ganja goes by two names, Indori and Shahbadi, the latter being probably that imported from Ujjain. The figures of average annual import are—bhang 9,385 maunds, ganja 100 maunds, and charas 25 maunds. There are no figures of export to support the hypothesis that the traffic passes through the State in large measure.

Shahpura.—Ganja and bhang are reported to be brought from Bhilwara, and the former drug is called Indori ganja. These names would point to the country west of Indore as the place of production. The local production of bhang is 125 maunds, and both imports and exports figure at 25 maunds.

Tonk.—The imports and exports are small, and the local production does not appear to be considerable. The figures of import are ganja 10 maunds, bhang 3 maunds, and charas less than 1 maund.

Bhartpur.—The State imports about 57 maunds of charas and 350 maunds of bhang, and exports about 5 maunds of the former and a trifling amount of the latter.

331. The information about production and trade in the Central India Agency is far from complete.

Central India.

Indore.—The cultivation of the Indore State is on the average about 115 acres, which would hardly yield 1,000 maunds of ganja. Mr. Gunion puts the figure for ganja and bhang together at 900 maunds. There is an average import of 153 maunds of ganja and 7 maunds of bhang, and an export of 377 maunds of ganja. The volume of transport within the State is 452 maunds of ganja and 399 maunds of bhang.

Dewas.—The yearly output in Dewas is reported to be 156 maunds of ganja and 64 maunds of bhang derived from 30 acres of cultivation.

Gwalior.—The memorandum on cultivation in the Gwalior State gives a total area of 400 acres. This might yield as much as 3,500 maunds of ganja and bhang together. These drugs are largely exported to the North-Western Provinces and the States of Rajputana and Central India.

Other States.—There is no information as to the production in other States of the Agency, or the volume of their trade in the hemp drugs.

Indore, Gwalior, and the Central Provinces appear to be the main sources of ganja supply for the whole of Central India and Rajputana and the North-Western Provinces. The evidence and general information tend to show that Indore and Khandwa are being supplanted by Gwalior, though Khandwa still exports largely. As in Rajputana, so in Malwa, charas is for the most part imported from the Punjab by Kabuli traders. Rewah is said to get its supply from Patna. The Indore statistics show no import of this drug. A small amount is said to be made in Gwalior as a bye-product of the ganja harvest, but it must be quite inconsiderable.

332. The average area of cultivation in the Baroda State is about 11 bighas or 6 acres, of which the outturn is 76 maunds of bhang. It appears that early in 1892 the system of administration was reformed. Exports have consequently ceased, and the nature of the statistics is now materially different from what it was before the change. In the first year of the new order of things the trade was probably disorganised, and it will therefore be better to refer to the figures of 1892-93 alone. These show an import of 214 maunds of ganja and 31 maunds of bhang. The retail sales of ganja in the same year were 438 maunds and of bhang 143 maunds. The ganja would appear to have come from the Deccan, and the bhang may have been partly supplied by Gujarat; but there is no clear information on the point. There is an export of 91 maunds of ganja entered against the Baroda Division, but there is nothing to show that it went out of the State. Charas is not used in the State. It may be noted that the change in the system of administration above referred to consists in the establishment of depôts in which all imports have to be stored, and from which they can only be removed under permit, and apparently a great increase in fixed duties.

Baroda.

333. The whole of the ganja or *gard* bhang or *chura* charas which is prepared in Kashmir, about 70 maunds, is consumed locally. A considerable quantity of bhang is carried away from Jammu into the Punjab. The quantity is not ascertainable. It

Kashmir.

appears to be gathered near the Punjab frontier. The traffic in charas from Leh through Srinagar has been noticed in connection with the Punjab imports. It would seem that the goods do not ordinarily change hands or break bulk in Kashmir.

Nepal.

334. The exports from Nepal into the North-West Provinces have been noticed. It is probable that a small amount of Nepal charas still finds its way to Calcutta. There may be a little smuggling of ganja into Bengal, but it cannot be important. On the other hand, the Bengal statistics show that Nepal took in 1892-93 177 maunds of Bengal ganja.

CHAPTER VIII.

EXTENT OF USE AND THE MANNER AND FORMS IN WHICH THE HEMP DRUGS ARE CONSUMED.

335. In endeavouring to measure the extent to which the hemp drugs are used, it will be best to deal with them in their simplest forms of ganja, bhang, and charas. The excise administration of the hemp drugs in Bengal is so systematic that the statistics of registered sale to retail vendors may be accepted as correct; and with regard to ganja and charas, they will be found to afford a very good indication of the actual consumption. With bhang the case is different, for most of this drug which is consumed outside the big cities escapes excise altogether. And the cities in which it can with any approach to truth be said that unexcised bhang is not consumed are very few.

Bengal.
Quality of statistics.

Ganja is the most important of the three drugs; it contributes nearly the whole of the hemp drug revenue, and is consumed in all parts of the province. In the case of Bengal it is possible to form with the help of the statistics a fairly accurate idea of the extent to which the use of it prevails in the various divisions and districts. On this subject a statement appears in the Excise Report for 1892-93: "Its consumption is largest in Calcutta, and next in Mymensingh and Dacca; it is also considerable in the 24-Parganas, Rangpur, Pabna, Tippera, Cuttack, Puri, and the districts of Behar"; and the qualification is added that the large apparent consumption in Behar is to be explained to some extent by export to the North-Western Provinces.

336. If the quantity sold in each division and district be compared with their population, it will be found that the divisions rank as follows (the figures of 1892-93 are taken)—

Consumption compared with population of ganja.

Presidency	...	...	...	...	1 maund to	9,000
Bhagalpur	...	...	...	...	„ „	10,000
Dacca	...	...	...	...	„ „	12,000
Orissa	...	...	...	...	„ „	15,000
Rajshahi	...	...	...	...	„ „	17,000
Patna	...	...	...	...	„ „	19,000
Chittagong	...	...	...	...	„ „	23,000
Burdwan	...	...	...	...	„ „	25,000
Chota Nagpur	...	...	...	...	„ „	30,000

and that the districts in which one maund does not suffice, or barely suffices, for 10,000 of the population are:—

Calcutta	...	...	...	...	1 maund to	1,400
24-Parganas	...	...	...	...	„ „	10,000
Jalpaiguri	...	...	...	...	„ „	9,000
Darjeeling	...	...	...	...	„ „	10,000
Dacca	...	...	...	...	„ „	8,000

Mymensingh	...	...	...	...	1 maund to	8,000
Shahabad	...	...	...	...	„ „	9,000
Monghyr	...	...	...	...	„ „	9,000
Bhagalpur	...	...	...	...	„ „	8,000
Purnea	...	...	...	...	„ „	9,000
Puri	...	...	...	...	„ „	10,000

337. The circumstances of Calcutta are of course altogether abnormal. It contains a vast number of coolies and day labourers, and workers in boats and on the river-side, besides a large foreign population, many of whom, such as domestic servants, porters, and watchmen attached to Government offices, to houses of business, and to private persons, and the followers of wealthy people, are notoriously addicted to the hemp drugs in one form or other. There are also present in the city all the conditions which tend to luxury and excess. The evidence shows that the use of ganja by some of the well-to-do classes is by no means rare, and the probability is that with people who have acquired the taste and can afford to gratify it freely the indulgence is not stinted either to themselves or their friends. Calcutta, therefore, not only contains amongst its population an unusually high proportion of consumers, but the consumers also take considerably more than the average individual allowance.

Consumption of ganja in Calcutta.

338. The districts where the consumption is highest come far behind the city of Calcutta. The favour in which the drug is held in the 24-Parganas is probably due in great measure to the neighbourhood of Calcutta; but it is also in evidence that the inhabitants of low and swampy tracts and the river population are specially addicted to it. Similar reasons, Dacca being a large city, may account for the high consumption of the districts of Dacca and Mymensingh. The shops in Darjeeling, Jalpaiguri, Shahabad, Monghyr, Bhagalpur, and Purnea very probably get a good deal of their custom, besides the recorded export, from beyond the frontiers of Bengal. Puri is a great resort of religious mendicants and similar people who are the most determined consumers of ganja. In other directions it is difficult to account for the great difference in the rate of consumption, as shown by the retail sales, in districts which adjoin one another, and in which very similar physical and economic conditions apparently prevail. Why, for instance, should Dinajpur be abstemious, lying as it does in the midst of districts which all show a full average consumption? It may be due to the absence of large rivers and of riverside population. But this explanation will not apply to Noakhali, which shows the smallest sale in the whole province, and is situated between Tippera and Chittagong, the former of which the Excise Commissioner regards as a district of heavy consumption, and the latter being not very exceptional in this respect. The consumption of opium and liquor is also very low in Noakhali.

Consumption of ganja in the districts.

339. The figures of retail sale mark off large continuous tracts, which can be distinguished from one another by their degrees of consumption, though it may not be easy to account for the differences between them. Thus the consumption is consistently

Tracts in which different degrees of use prevail of ganja.

low throughout the four hill districts of the Chota Nagpur Division, the comparatively high rate of Lohardaga being due in all probability to the fact that Ranchi, the head-quarters of the division, has a considerable population of foreigners. Manbhum in the Chota Nagpur Division, Bankura and Midnapur in the Burdwan Division, and Balasore in Orissa form the skirt of the south-western hill tract, and are content with one maund of ganja for every 25,000 of the population. There is probably a certain amount of smuggling from the Hill States into these districts, but it can hardly be sufficient to affect their character as ganja consumers in the comparison now being made. North-east and east of Calcutta lies a huge tract of low consumption, comprising the districts of Noakhali, Khulna, Jessore, Nadia, Backergunge, and Faridpur. This fact hardly bears out the theory that residence in low-lying country and river-side life are very intimately connected with the ganja habit. In the districts situated immediately west and north-west of Calcutta, and in the Rajshahi Division and in Malda, the consumption is about average. Further west, in the Patna Division, the consumption falls off.

Area of heavier consumption of ganja marked off.

340. The province might possibly be divided into two portions so as to indicate consumption above and below the average. A straight line drawn from Monghyr on the Ganges to Raipura on the Megna in the Noakhali district, and turned north and east at the respective ends direct to the frontiers of the province, would mark off broadly the portion in which consumption exceeds one maund to 15,000 of the population. It would include all the river population on the Ganges and Brahmaputra between the two places named. South and west of this line there would be found only Calcutta, the 24-Parganas, and Puri with consumption exceeding the above figure.

Incidence of consumption in the whole population.

341. The consumption of the whole province, including Calcutta, is one maund to 13,000 of the population, and excluding Calcutta one maund to 14,000. This maund consists of the drug as issued from the local golas, while the figures of consumption given by witnesses represent the quantity of the detached pieces of ganja as they are manipulated for use. Allowing for the waste between the gola and the *chillum*, it will be fair to put the consumption at one maund to 16,000 of the population.

Individual consumption of ganja.

342. The Excise Commissioner reports that the average retail price of ganja is Rs. 20 per sér. It ranges from Rs. 12 in Calcutta, Patna, Cuttack, and Chittagong to above Rs. 30 in Mymensingh, or from $2\frac{1}{2}$ annas to more than 6 annas per tola, the average being 4 annas. It appears from the evidence that $\frac{1}{16}$th of a tola is the smallest quantity that will suffice for one *chillum*, and that more is required if more than two or three smokers have to partake of it. That quantity apparently affords one smoke to two persons, and the refreshment seems to be generally taken twice a day. For the most moderate habitual smokers, therefore, $\frac{1}{16}$th of a tola may be taken as the daily allowance. This represents an expenditure of $\frac{1}{4}$ anna a day and a yearly allowance of 23 tolas. But Mr. Gupta reports, and he is corroborated by the great bulk of the witnesses, that the average allowance is higher than this, lying between $\frac{1}{4}$ anna and $\frac{1}{2}$ anna per diem. Accepting this opinion, the daily cost to the moderate consumer may be put at $4\frac{1}{2}$ pies, and the

yearly allowance at 35 tolas. In order to frame an estimate of the total number of consumers who are supplied by the yearly sale of excised ganja, the excess allowance of excessive consumers has to be added to this figure.

Proportion of excessive consumers of ganja.

343. The following very clear statement on the subject of moderate and excessive consumption may be quoted from the evidence of Babu Gobind Chandra Das, Deputy Magistrate and Collector of Malda :—

"I have taken some statistics on this point. The ganja shop at this town of English-bazar sells ganja at the rate of Rs. 20 a sér. I enquired of a large number of persons who come to purchase ganja at this shop as to their daily consumption of their drug. Altogether 378 persons were examined. Of these, 247 persons stated that they spent a pice (¼ anna) a day on this drug, 106 persons gave 2 pice (½ anna) as their daily expenditure on ganja, whilst only 13, 7, 1, 3, and 1 stated their daily consumption to be 3 (¾ anna), 4 (1 anna), 5 (1¼ annas), 8 (2 annas), and 10 (2½ annas) pice respectively. I am sure most of these men understated their consumption to a very considerable extent. But looking to the fact that purchasers of ganja are not the only persons who consume the drug, and that a large number of persons who consume ganja do so at the expense of their richer companions, I think it is safe to say that the majority of ganja smokers do not spend more than two pice (½ anna) a day upon ganja. The retail price of ganja in this district is about Rs. 20, so that two pice (½ anna) can fetch a man only ⅛th tola of ganja. This is not sufficient for more than three *chillums*. I think it cannot be considered as excessive. On this datum it can be said that the majority of the ganja smokers are moderate consumers. As regards occasional consumers, all that can be said is that their number is extremely small. In fact, it is impossible for a man to consume even a pretty large quantity unless he is a habitual consumer and has kept up the habit by daily use."

This estimate of daily moderate consumption is rather higher than has been adopted above on consideration of all the available evidence; but the witness's general conclusions appear to be sound. The extremely small proportion of excessive consumers is corroborated by many witnesses who have devoted care and thought to the question, though it falls below the estimate of the bulk of those who have contented themselves with simply putting down their opinions in figures without discussion or comment. The witness quoted does not make special mention in this place of the religious classes. He states elsewhere (answer 20) that the number of a special class of them in his district is about 1 in 100 souls, which is not a small proportion. The addition of the other classes of religious ascetics and mendicants will give a considerably higher ratio, and the district will then have a full average proportion of these people. They have probably therefore entered into the enquiries and calculations of the witness which may be accepted as fairly representative of all classes of consumers, including that which is notorious for excessive use of the hemp drugs.

The standard of average moderate consumption of ganja.

344. The excessive consumers then must be regarded as bearing but a small proportion to the moderate—certainly not more than 5 per cent., or 1 to 20. And this accords with reason, for the bulk of the consumers of ganja are poor and cannot afford over-indulgence in a luxury which, in Bengal at all events, is not cheap. The yearly consumption of a moderate individual has been estimated at 35 tolas, and distributing the excess amount taken by immoderate users over the whole number of consumers, the individual allowance for a year may be put at 40 tolas, which is half a sér or one-eightieth of a maund. By this measure

the number of consumers of excised ganja is easily calculated, and is shown in the attached statement.

Division.	District.	Population.	Maunds of ganja sold in each district.			Number of persons per maund.	Number of consumers at the rate of 40 tolas per annum.	Percentage of consumers to population.
			Sold.	Exported.	Balance for local consumption.			
Burdwan ...	Burdwan	1,391,880	70	...	70	19,000	5,600	·4
	Bankura	1,069,668	22	...	22	48,000	1,760	·2
	Birbhum	797,833	45	...	45	17,000	3,600	·5
	Midnapur	2,631,516	71	...	71	37,000	5,680	·2
	Hooghly	1,076,710	60	...	60	17,000	4,800	·4
	Howrah	721,211	32	...	32	22,000	2,560	·4
	Total ...	7,688,818	300	...	300	25,000	24,000	·3
Presidency ...	24-Parganas ...	1,892,033	174	...	174	10,000	13,920	·7
	Calcutta	874,450	592	...	592	1,400	47,360	5·4
	Nadia	1,644,108	39	...	39	42,000	3,120	·2
	Jessore	1,888,827	50	...	50	37,000	4,000	·2
	Khulna	1,177,652	42	...	42	28,000	3,360	·3
	Murshidabad ...	1,250,946	58	...	58	21,000	4,640	·4
	Total ...	8,728,016	955	...	955	9,000	76,400	·9
Rajshahi ...	Dinajpur	1,555,835	52	...	52	29,000	4,160	·3
	Rajshahi	1,313,336	71	5	66	19,000	5,280	·4
	Rangpur	2,065,464	115	...	115	17,000	9,200	·4
	Bogra	817,494	43	...	43	19,000	3,440	·4
	Pabna	1,362,392	99	...	99	13,000	7,920	·6
	Darjeeling	223,314	21	...	21	10,000	1,680	·8
	Julpaiguri	681,352	73	...	73	9,000	5,840	·9
	Total ...	8,019,187	474	5	469	17,000	37,520	·5
Dacca ...	Dacca	2,420,656	271	...	271	8,000	21,680	·9
	Faridpur	1,797,320	73	...	73	24,000	5,840	·3
	Backergunge ...	2,153,965	64	...	64	33,000	5,120	·2
	Mymensingh ...	3,472,186	393	...	393	8,000	31,440	·9
	Total ...	9,844,127	801	...	801	12,000	64,080	·7
Chittagong ...	Chittagong	1,290,167	62	...	62	20,000	4,960	·4
	Noakhali	1,009,794	14	...	14	72,000	1,120	·1
	Tippera	1,782,935	100	...	100	17,000	8,000	·4
	Total ...	4,082,896	176	...	176	23,000	14,080	·3
Patna ...	Patna	1,769,004	434	279	155	11,000	12,400	·7
	Gaya	2,138,331	93	...	93	22,000	7,440	·3
	Shahabad	2,063,337	321	113	208	9,000	16,640	·8
	Muzaffarpur ...	2,711,445	108	39	69	39,000	5,520	·2
	Darbhanga	2,801,955	129	32	97	28,000	7,760	·3
	Saran	2,467,477	233	134	9	24,000	7,920	·3
	Champaran ...	1,859,465	178	78	100	18,000	8,000	·4
	Total ...	15,811,014	1,496	675	821	19,000	65,680	·4
Bhagalpur ...	Monghyr	2,036,021	243	32	211	9,000	16,880	·8
	Bhagalpur	2,032,606	244	...	244	8,000	19,520	1·0
	Purnea	1,944,658	228	29	199	9,000	15,920	·8
	Malda	814,919	64	...	64	12,000	5,120	·6
	Sonthal Parganas ...	1,754,196	79	...	79	22,000	6,320	·4
	Total ...	8,582,490	858	61	797	10,000	63,760	·7
Orissa ...	Cuttack	1,937,671	113	...	113	17,000	9,040	·5
	Puri	944,098	92	...	92	10,000	7,360	·8
	Balasore	994,625	37	...	37	26,000	2,960	·3
	Total ...	3,877,294	242	...	242	16,000	19,360	·5
Chota Nagpur	Hazaribagh... ...	1,164,321	30	...	30	38,000	2,400	·2
	Lohardaga ...	1,137,331	50	...	50	22,000	4,000	·4
	Palamau	596,770	14	...	14	42,000	1,120	·2
	Singhbhum	545,488	13	...	13	41,000	1,040	·2
	Manbhum	1,193,328	43	...	43	27,000	3,440	·3
	Total ...	4,637,238	150	...	150	30,000	12,000	·3
	GRAND TOTAL ...	71,271,080	5,452	741	4,711	15,000	3,76,880	·5

345. A fair average consumption for the whole province, exclusive of the Native States, is 5,000 maunds, and this suffices for 400,000 smokers at the above allowance. The number of smokers in the total population of 71,271,000 is thus something over one-half per cent. In Calcutta and the 24-Parganas together the smokers number more than 2 per cent. of the population. In the heavy consuming districts of Dacca, Mymensingh, and Bhagalpur they are about 1 per cent. In only a few other districts in the divisions of Rajshahi, Bhagalpur, Patna, and Orissa do they exceed one-half per cent. Smoking is practically confined to adult males. Assuming that these are one-quarter of the total population, the smokers do not number more than one man in 50 over the whole province. The above calculation of the daily and yearly allowance does not probably err on the side of excess, and it follows that the estimate of the number of consumers is rather over than under the mark. It is to be noted that Babu Hem Chunder Kerr estimated the consumption per head at 1½ sérs per annum, or three times the amount here adopted. At the average price of ganja, Rs. 20 per sér, the Commission's estimate of half a sér is equivalent to a yearly expenditure of Rs. 10, and it is not likely that the poor people, who form the great bulk of the consumers, could afford more than this amount.

Number of consumers estimated.

346. The use of bhang does not admit of a similar survey being made, because the wild plant grows in such quantity over a large part of the province, and passes into consumption freely without the intervention of the Excise Department. Excised bhang is sold in eight out of the nine divisions, the exception being Rajshahi; but in three other divisions—Dacca, Chittagong, and Orissa—the quantity is quite insignificant. In the Bhagalpur Division the sale is probably confined to the towns of Monghyr, Bhagalpur, and Deoghur in the Sonthal Parganas, which is a religious resort, and, all told, it is very small. There is an appreciable amount sold in Hazaribagh and Palamau of the Chota Nagpur Division, which would seem to show either that the hemp plant is not cultivated in the States of that Agency to any great extent, or that, if cultivated, it is not easily accessible to the people of these districts. From the evidence of direct restriction in these States, the former of these alternatives appears to be the fact. In the Burdwan Division also there is a certain sale. But Calcutta with the 24-Parganas, Patna, and Gaya are the only places where the excised drug finds any considerable market. There is a large sale in Shahabad of the Patna Division. The Collector's evidence would show that in this district, which contains the important city of Arrah, the hemp habit is more than commonly prevalent. But it is probable that, as in the case of ganja, there is some export to the North-Western Provinces.

Extent of use of bhang.

347. The evidence shows that the occasional use of bhang in the form of drink is almost universal with Hindus, and that its regular use is uncommon among the inhabitants of Lower Bengal, but very prevalent among the people of Upper India. The habit is accordingly found to increase towards the frontier of the North-Western Provinces. All that the statistics can be held to show is that there is no sale for the excised drug where the wild growth is abundant. They are no guide as to the comparative prevalence of the habit in various parts of the province. Such deductions as can be made in the districts where the wild growth is absent or rare confirm the evidence that the habit of bhang drinking is uncommon

Use of bhang in parts of the province.

with the Bengalis. Under these circumstances it is not worth while, even in these districts, to attempt to measure the prevalence of the habit with more exactness.

Individual consumption of bhang.

348. But the evidence throws some light on the amount of individual consumption, and the statistics of Calcutta may prove interesting. The average total consumption of bhang in Calcutta during the last 5 years has been 440 maunds, which is about one maund to 2,000 of the population, or somewhat less than the rate of ganja consumption measure for measure. The retail price of the drug is about Rs. $2\frac{1}{2}$ or Rs. 3 per sér (memo. and witness 123). The daily allowance is very irregular. It is stated by Babu Hem Chunder Kerr that moderate use ranges from $\frac{1}{2}$ tola to 2 tolas a day, and by others that $\frac{1}{4}$ tola is the usual allowance, and that even this small amount is sometimes made to last for two or three days. The explanation of this irregularity is probably to be found in the facts that the drug is cheap, that it is not very potent, and large doses do not therefore produce unpleasant consequences; that the preparation of the drink is somewhat troublesome and inconvenient; and that the intermittent and occasional use as a cooling draught is common.

A yearly allowance of $2\frac{1}{2}$ sérs represents a daily use of little over $\frac{1}{2}$ a tola in quantity and $\frac{1}{4}$ anna in price—figures which appear reasonable and in accordance with the evidence. At this rate the yearly sale of Calcutta would supply about 7,000 persons. There are many consumers, especially up-country people, who take more than the allowance on which this calculation is based. But, on the other hand, the above number must be multiplied by a high figure if it is sought to include all who take the drug occasionally.

Extent of use of charas.

349. Charas is an expensive luxury, and its use in Bengal is very limited. The total consumption in the city of Calcutta and the district of Murshidabad is only 11 maunds. The Excise Commissioner reports that the average price of charas is Rs. 40 a sér, or double that of ganja. The dose seems to be about the same as that of ganja in each smoke. But the drug is used by people of better means. It is therefore in all probability taken more liberally, and excess is more common. The individual cost would therefore come to far more than double the cost of ganja. The daily allowance might be put at $\frac{1}{4}$ tola, costing 2 annas. The yearly consumption would thus be about one sér per head of the consumers, and the total import of 11 maunds 26 sérs would suffice for 466 persons. It may be noted that in Bengal charas is reputed to be weaker than ganja. It is possible that this may be true as the result of deterioration of the former in coming from the Punjab.

Sales to retail vendors.

350. The figures relating to ganja consumed in the province for the last 20 years, as shown by the sales to retail vendors in the various districts, show a large decrease from the first period of 5 years. The figures are as follows:—

Average.					Maunds.
1873-78	...	...	...	...	7,111
1878-83	...	...	...	...	5,297
1883-88	...	...	...	...	5,249
1888-93	...	...	...	...	5,133

The proportions of the various kinds of ganja have varied considerably during these periods, but, after having attempted to estimate the effect of these variations, the Commission find that the general result is the same as that above shown, *viz.*, that consumption has been stationary during the last 15 years, but that the average consumption has been much less than that of the previous 5 years. The increase of population, however, during this period must not be lost sight of. It amounted to about $7\frac{1}{2}$ per cent. between 1881 and 1891, and, notwithstanding this, there was no increase in consumption during this period. In districts where the consumption has decreased, there are witnesses who say that the enhanced cost of ganja has reduced, and is reducing, the habit. Evidence is not wanting, however, to show that other causes also may have been at work to produce the result. The growing taste for liquor is one of the principal causes mentioned. This refers to the superior classes. One deposition alone (Patna District Board, 248) states that the low price of country liquor has caused a decrease in the sale of ganja among the inferior classes. This evidence, however, is contrary to the view held by the Excise Commissioner, who states in his memorandum (paragraph 65) that liquor, even in Bihar, is much dearer than ganja. Babu Hem Chunder Kerr attributes decrease to the disrepute in which the habit is held and the belief that its effects are baneful. An Utopian zamindar, a Muhammadan, attributes the decrease to the enlargement of the peoples' minds by education, the action of temperance associations, the publication of treatises and tracts which condemn the drugs, and the spread of civilization. In the statements of witnesses who endeavour to explain the increase alleged to have occurred in their own particular districts, the following reasons for such increase are given. In exact contradiction to the evidence that the growing taste for liquor is reducing the consumption of ganja among the better classes, it is now occasionally stated that the great cost of the liquor habit and its deleterious effects are making the same classes go back to ganja. Among the lower classes the raising of the price of liquor under the central distillery system is also said to be a direct encouragement to ganja. It is even stated that the example of the better classes is an encouragement to the lower, although the weight of evidence tends to show that the former are abandoning ganja. The better wages earned by the labouring classes, who are the principal consumers of ganja, is sometimes held to account for the increase. Bad seasons and consequent want of means have, it is said, brought the cheapest intoxicant into favour. As a special cause is mentioned the recent establishment of a new form of worship of Trinath in Eastern Bengal. The existence of the shops is said to be a direct incentive to consumption, but the statement of witness (202) that the officers of Government make strenuous efforts to push the sale, presumably for the sake of the revenue, was not sustained under oral examination. Some of the above reasons apply also to the increased consumption of bhang, which is far cheaper than ganja. And another very good reason is given in respect to this form of the drug, *viz.*, the influx of up-country workers into the mills and similar industries of Calcutta and its neighbourhood.

Reasons for local increase or decrease.

351. The above analysis of the evidence gives some of the reasons alleged by individual witnesses for local increase or decrease, and indicates the various causes which have assisted or interfered with the general tendency to decrease which is manifested in the provincial statistics as a whole.

Kuch Behar.

352. The statistics furnished by the Kuch Behar State show an average retail sale of 76 maunds, which by the standard of the province should supply 6,000 consumers, or more than 1 per cent. of the population. The consumption seems to be stationary, though there is a gradual decrease of retail sale in the last three years.

Tributary States of Chota Nagpur and Orissa and Hill Tippera.

353. There are no means whatever of judging of the extent of use in these States.

North-Western Provinces.

The use of the three forms of the drug in various parts.

354. In the North-Western Provinces all three drugs—ganja, charas, and bhang—are very largely consumed. Bhang is used everywhere, and there is no evidence to show that the use is more common in one part of the province than another, if the Kumaon Division be excepted. It would appear that in the mountains the drug is only drunk or eaten in the form of majum by a few well-to-do people in the towns at the Holi festival. But the consumption is heavy in particular spots, such as Mathra, the home of the Chaubes, who appear to be the greatest and most notorious bhang drinkers in the whole of India, and Benares and other holy places on the Ganges. With regard to ganja and charas, the province may be divided into three parts. In the western portion, consisting of the divisions of Meerut, Rohilkhand, and Kumaon, ganja is hardly used at all. The statistics show no imports except at Shahjahanpur, which is on the extreme east of this section of the province. The drug in favour here is charas to the exclusion of ganja. In the eastern and southern portion, comprising the divisions of Benares, Gorakhpur, Allahabad, and great part of Fyzabad, ganja holds the field, though not to the exclusion of charas, except in the districts bordering on Bundelkhand. In the central portion of the province, comprising the Agra and Lucknow Divisions and part of the Allahabad and Fyzabad Divisions, both drugs seem to be freely consumed.

Consumption compared with population of ganja.

355. In dealing with the trade of the province, the figure of imports of ganja given in the statistics was accepted in full view of Mr. Stoker's caution that it was not reliable, and his estimate that the import was between 4,000 and 4,500 maunds. For the present purpose the same figure, though in excess of Mr. Stoker's figure, may be taken; for it is necessary to include the local unexcised ganja, which no doubt comes into use in some quantity. In Bengal but small allowance was made for waste, and since figures of sale to retail vendors were supplied, only the waste which took place between the local gola and the *chillum* had to be considered. In dealing with the drug in the state in which it is imported, and with an import the greater part of which consists of an article which is less carefully prepared and far less valuable than Bengal ganja, a much higher allowance for waste must be made. Taking all things into consideration, it is doubtful if the consumption can be fairly fixed at more than 3,500 maunds. The North-Western Provinces give no figures of retail sale to aid this calculation. The total population of the province is 47,000,000, and one maund of ganja therefore suffices for some 13,000 persons. If the population of the divisions of Meerut, Rohilkhand, and Kumaon, where ganja is not used, be deducted (about 12,000,000), the maund of ganja suffices for only 10,000 persons. Judged by the Bengal standard, this is a high figure; but the cheapness and comparative weakness of the greater

part of the drug consumed in the North-Western Provinces may well induce a liberal use, and this result may approximate to the truth.

Individual consumption of ganja.

356. Mr. Stoker does not accept Babu Hem Chunder Kerr's estimate of average consumption per head at the high figure of 1½ sérs. At 6 annas a tola this means Rs. 45 a year, and this is obviously quite beyond the means of the consumers of average means. The individual consumption in Bengal has been estimated at half a sér, or Rs. 10 per annum. Mr. Stoker, dealing with a drug or mixed drug that costs less than *baluchar*, calculates the individual consumption at one sér, and the whole supply of 4,500 maunds as sufficient for 180,000 smokers. By the Bengal standard 3,500 maunds would supply 280,000 persons. It seems proper to make allowance for the cheapness of the drug and adopt the mean of the above calculations, or 230,000. This represents something less than ½ per cent. of the population. In the cities, *baluchar* sells at 6 annas a tola. It is cheaper in the villages probably because it is adulterated with *pathar*, which is anything from one-twelfth to one-sixth of the price of the other. If the average annual allowance of something less than one sér be regarded as being composed of ¼ *baluchar* and ¾ *pathar*, the cost comes to a reasonable figure.

Extent of use of charas.

357. With regard to charas, Mr. Stoker estimates the individual consumption at half a sér per annum. For Calcutta it was put as high as one sér, because it was regarded as a luxury of the comparatively wealthy. But it does not hold that position in the North-Western Provinces. The evidence shows that it is used by the poor more than by the rich. In many places it is actually cheaper than *baluchar* ganja, and being stronger less of it is used at a time. It is probable that Mr. Stoker's estimate approximates to the truth, and that the 1,150 maunds imported are consumed by about 92,000 persons. The use is most common in the Meerut, Rohilkhand, and Kumaon Divisions, and decreases towards the east of the province; but it is found in all districts, except those bordering on Bundelkhand, where the consumption is trifling. The consumers are at the above figure about one-fifth per cent. of the population, and this covers an addition for the small indigenous production of Kumaon.

Extent of use of bhang.

358. Bhang is not used regularly like charas and ganja. There is reason to think that a large number of the better class of Hindus take it in extremely hot weather, and that it is a regular refreshment with a very large proportion of them in the summer. There are no statistics of consumption; the drug can often be had for almost nothing from the abundant wild growth, and is always very cheap. The price of bhang seems to range from 4 annas to as much as one rupee a sér in towns, *tatia* bhang from Farakhabad being more expensive than commoner kinds, while *baluchar* ganja is Rs. 20 to Rs. 30, charas Rs. 7½ to Rs. 25, Nepal ganja going as high as Rs. 35 and Rs. 40 a sér, and *pathar* ganja Rs. 2½ to Rs. 5.

Increase and decrease.

359. In the last twenty years, from 1873 to 1892, the hemp drug revenue of the North-Western Provinces and Oudh has grown from 4 to 7 lakhs. The increase in Oudh has been 193 per cent., and in the North-Western Provinces 50 per cent. It is from the figures of revenue, in the absence of statistics of retail sale, that deductions have to be made as to the rise or fall of the consumption of the drugs.

360. Mr. Stoker connects these fluctuations in some important instances with changes in the administration of the liquor excise. He shows pretty conclusively that the hemp drug revenue has risen when the price of liquor has been raised, and that it has fallen when under the establishment of the outstill instead of the central distillery system liquor has been made more plentiful and more cheap. It is stated that the liquor revenue has in the same period grown from 17 to 32 lakhs, and that the enhanced revenue has been raised on a diminished issue of liquor. If there is this intimate relation between liquor and the hemp drugs, it seems to follow that the decreased consumption of liquor must have been accompanied by an increased consumption of the hemp drugs. And to this a reasonable addition must be made on account of an increase of 5 millions in the population in the twenty years' period. There is no reason to doubt that increase of consumption assignable to these two causes has actually occurred, for they are to all intents and purposes independent of any check or restriction arising out of the present system of hemp drug excise. The evidence shows that bhang has not got dearer; that the enhanced cost of *baluchar*, due to the Bengal duty, has been counteracted by the supply of a cheaper article; and that charas has actually been falling in price, thanks to improved communications.

Connection between the use of liquor and hemp drugs.

361. Besides indicating the relationship between the liquor and the hemp drug habits, the figures of revenue, great though the expansion has been, do not go far to assist in ascertaining whether the consumption of the hemp drugs has grown or not. There is the probability that the demand has increased, bringing greater profits and consequently more keen competition amongst the purchasers of the farms. But Mr. Stoker's remarks lead to the belief that the enhancement of the revenue has been due partly to improved management, resulting in the checking of clandestine practices, or, as he describes it, the stopping of "leakage." To judge by the instances given, losses of this sort were very considerable; and this reform, together with the prevention of smuggling and illicit traffic, would go far to account for the increase.

Increase of revenue due to improved administration.

362. Turning to the evidence, there is little definite testimony of increased consumption, in which it is clear that the opinion is based on actual observation. There are not in this province as there are in Bengal definite statistics on which to form an opinion as to increase or decrease. The preponderance of testimony is in favour of increasing consumption, and the high price of liquor is more frequently alleged as the cause than anything else. Witness (20) makes a very definite statement on this point. Allied to the reason connected with liquor is found the closing of chandu and madak shops mentioned by some witnesses. Other causes given are the accessibility and cheapness of the drugs, the weakening of social and religious restraints, facilities for travelling leading to the circulation of bad habits, general demoralization, and the increase of poverty and the number of sadhus and mendicants. It is stated by some witnesses that under Moghal rule the drugs were prohibited and their consumption suppressed by penalties such as whipping and mutilation, and that the present liberty has degenerated into license. On the other hand, the perversity which drives people to do what is restricted or prohibited is alleged by another as the cause of increase. Another attributes increase to experience of the beneficial effects of use of the drugs. It appears that there is an

Direct testimony as to increase.

organized movement among the Kayasths which forbids the drinking of liquor, and that these people are taking to bhang instead. Some witnesses allege that irrigation in rendering the country damp and cold makes the drugs a necessity, and one that the use of charas is increasing because the drug "is generally prepared and sold (as retail-dealing) by the fair sex in large towns." This last matter was taken up by the Commission, and will be noticed further on.

Direct evidence of decrease.

363. But the evidence is not all on the side of increase. Some witnesses think that the consumption is stationary, and some that it is decreasing. The principal cause of decrease alleged is the change of habit among the higher classes and the better-to-do of the lower in the direction of liquor. The high cost of the drugs has, according to one or two witnesses, caused people to abandon them.

Competition between ganja and charas.

364. There is some evidence that ganja is being supplanted by charas in public favour. Mr. Wall, late Commissioner of Excise, wrote as far back as 1881: "From the large proportion which charas bears to other drugs in large cities like Allahabad and Benares, and from the increase in license fees for sale of charas which is noticed by the Bengal Government, it is highly probable that charas is coming into favour. It is, in fact, said that within the last few years, owing to increased duty levied on *baluchar* ganja in Lower Bengal, the consumption of charas has largely increased everywhere." Charas is now even cheaper as compared with Bengal ganja than it was then, and there is some evidence that the change is still going on.

Rampur.
Extent of use of the drugs.

365. The Revenue Member of the Rampur Council of Regency (35) states that people smoke ganja and charas everywhere in the North-Western Provinces and in the State of Rampur. Rampur, however, is situated in the Rohilkhand Division, where charas appears to be used almost exclusively. It is probable, therefore, that the statement about the use of ganja in Rampur is rather too general. This witness also alleges that the use of all three drugs is increasing because they are cheap, and they are not forbidden by the Hindu religion.

Tehri Garhwal.
Extent of use of the drugs.

366. The use of the drugs in Tehri Garhwal is probably as prevalent as it is in Kumaon and British Garhwal. There is no special information for the State, but from the evidence of witness (49) it may be assumed that charas is the only form of the drug used; that its use is not extensive, but possibly spreading through "a growing tendency to take narcotics of all kinds."

Punjab.
Extent of use.
Charas and bhang are used, not ganja.

367. In the Punjab the use of ganja disappears, the indications of its existence being found only in the statements of occasional witnesses. It has no place in the excise arrangements. Charas and bhang are used to a greater or less extent in all parts of the province. Regarding bhang, the Excise Commissioner admits that a certain quantity is consumed without passing through the hands of the licensed vendors, but he does not think that it is very great, because the people of the parts in which the plant grows wild are not addicted to its use, while the retail price (three or four annas a sér) is so small that it is not worth while for a consumer to attempt to obtain a supply elsewhere than from the nearest licensed shop. There is, however, reason to

believe that in the south-west corner of the province, where the use of bhang is most prevalent and cultivation is carried on to the extent of about 100 acres, a considerable share of the locally grown drug escapes excise. Regarding charas also, it is probable that the figures of retail sale do not represent the full consumption. These considerations do not, however, affect the view of comparative consumption of the two drugs over the province which the Excise Commissioner has presented in his memorandum, except possibly that the consumption of bhang in the south-east corner may be larger than is represented.

Extent of use of charas.

368. Taking charas first, it will be seen that its use is most prevalent in the Ludhiana district, and to a somewhat less degree in the Himalayan districts, and in and about the cities of Delhi, Umballa, Amritsar, Lahore, and Peshawar, and that generally the eastern half of the province has decidedly more inclination to the drug than the western half. The measure by which the two halves of the province are differentiated is a consumption of 5 ounces by 100 of population. This measure might be raised to 6 ounces on account of defective registration of sale, and expressed in the terms used for Bengal in this report as one maund to 21,500 of the population. The rate of consumption in Ludhiana is double of this, or one maund in 10,000, and in the greater part of the western half of the province is hardly more than one maund to 60,000.

Individual consumption of charas.

369. In the North-Western Provinces Mr. Stoker estimated the individual consumption of charas at half a sér per annum. In the Punjab a somewhat higher rate might be adopted because the drug is cheaper, the price to consumers ranging from Rs. 4 to Rs. 15 per sér in this province, while in the North-Western Provinces it was Rs. 7½ to Rs. 25. If the number of consumers be taken at 60 instead of 80 to the maund, the total number for a total consumption of 1,200 maunds will be 72,000.

The divisions of Delhi, Jullundur, and Lahore consume five times as much as Rawalpindi, Peshawar, and the Derajat, and there must therefore be 60,000 consumers in the former to 12,000 in the latter. In this comparison also the province falls into the same halves as before, for the consumption of the districts of Montgomery, Multan, and Jhang in the Lahore Division barely reaches 20 maunds, and does not therefore materially affect the figures.

Extent of use of bhang.

370. The total retail sale of bhang on the average of the last five years is 3,800 maunds. This probably falls considerably short of the actual consumption owing to the existence of the wild growth in many districts, the regular cultivation which is carried on in the south-western districts, and the homestead cultivation which seems to prevail all over the province to a limited extent. A very appreciable supply must be got direct from these three sources without the intervention of the licensed vendors. Maunds 4,200 would represent a supply of one maund to every 5,000 of the population. The Excise Commissioner finds that the south-eastern districts have the heaviest consumption, 100 to 145 oz. to 100 of the population, or about one maund to 1,000 persons; the central districts come next with about one maund to 4,000 of the population, and the rest of the province consumes one maund to about 8,000, except that the districts of Delhi and Ludhiana almost come up to the districts of heaviest consumption.

371. Bhang is so cheap, 3 or 4 annas a sér, as to give very wide latitude for individual indulgence. On the other hand, a great share of the consumers, perhaps the majority, are above the class of the very poor, and the drug is to a great extent used with ingredients which are more or less expensive. Occasional use, either regulated by the season, or prompted by the weather, or connected with social and religious observances, is also very common. These things make it extremely difficult to state any estimate of the number of consumers, though a figure of total consumption has been arrived at. It is very doubtful if more than about half of the total consumption, or 2,000 maunds, is taken by regular and habitual consumers. For such persons, at the price given above, two tolas a day, or ten sérs in the year, would not be an extravagant allowance. The cost of this would be less than three rupees a year, and the ingredients would bring the expenditure up to about Rs. 10. The number of habitual consumers would thus be about 8,000. This estimate of individual consumption accords with the evidence on the particular point. The occasional consumers are many times more numerous. The description which is to follow of the "classes of consumers" and of the "social and religious customs" connected with the use of the drugs will throw more light on the extent of the occasional use of bhang. The use as a summer drink seems to be much more common in the northern parts of India, which are characterized by intense dry heat, than in the southern. The dividing line might be drawn with fair accuracy from the Runn of Cutch to Darjeeling.

Estimate of number of bhang consumers.

372. The statistical table in the form prescribed by the Commission gives retail sales from the year 1875-76 to 1892-93. But in the first five of these years it is obvious that the figures include transactions other than retail sale in column 45. From 1881-82 onwards there is a steady increase in the figure for charas, interrupted only by a fall in the year 1890-91, which, however, was more than made up by the rise of the following year. In the year 1892-93 the figure is 6 maunds less than in 1891-92. As regards bhang, the figures of the whole period 1880-81 to 1892-93 do not offer any definite suggestion of increase or decrease. Their regularity might, however, tend to remove the hesitation which the Commission feel in accepting the figures for charas as a reliable index of consumption if it were not that bhang is so cheap that there can be little temptation either to smuggling outside the shops or the keeping of incorrect accounts within them. The sale of other preparations of hemp shows a steady decrease. These preparations must include majum and other sweetmeats into which hemp enters. They are not very important, and it is not therefore worth while to speculate whether the decrease of sale means a real decrease of consumption or not. It would be necessary to proceed on mere conjecture, for the evidence and Government papers throw no light on the subject.

Increase and decrease.

The evidence of the statistics.

373. Regarding rise or fall in the consumption of bhang also, there is little to be said. Mr. Drummond states that the use of this form of the drug is increasing in the south-eastern districts, and that caste movements against alcohol, enhanced cost of spirits, and growing prosperity among the Jats may account for it. But there is little other evidence to indicate increase, and the statistics of the Delhi Division do not suggest it. On the contrary, there is evidence that the better

Bhang.

classes are giving up bhang for liquor—a change of habit which has been noticed in other provinces.

Evidence regarding charas.

374. The steady and considerable increase which the statistics of the consumption of charas shew in the last ten years is not reflected in the evidence in a very decided manner. It is true there are some who allege increase as being caused by the development of the Central Asian trade, the fall in the price of charas, the increase in the number of shops, the increase of population, and the addition to the number of poor and idle people. But there are many who allege decrease; and the more weighty opinions are all in favour of the view that the use is neither increasing nor decreasing. It is true that during the last three years there has been a great development of the trade in charas, but the excess imports have for the most part passed over the Punjab into other provinces and territories, and only a portion of the increase appears from the figures to have stayed in the province. The figures in column 45 of the statement do not appear to be derived from accounts of actual retail sale. They are the exact difference of columns 12 and 16, and the explanatory note attached to the table shows that they are got by subtracting the exports from the imports. In saying that "it is one of the incidental advantages which we expect to derive from the proposed new arrangements that we shall be able to register the import trade efficiently and acquire a proper control over it," the Excise Commissioner appears to admit that the record of imports into the province is not reliable even yet. He considers the statistics of consumption fairly accurate. They were derived in 1892-93 from a comparison of the imports and exports in each district in order, as he says, to give reliable figures of the quantity retained in each district for consumption. But whatever method was employed in 1892-93 seems to have been also employed in previous years, for the figures in column 45 are throughout merely the difference between columns 12 and 16. The Commission therefore have considerable doubt as to the correctness of the figures as indicating a steady increase to consumption for the last 13 years from 480 maunds to 1,020 maunds. This apparent increase may be due to improved methods of registration.

Punjabs States.
Extent of use.

375. The Native States of the Punjab all lie, with the exception of Bahawalpur, in the eastern of the two halves into which the province is divided in reference to its habit of consuming charas. Leaving Bahawalpur out of consideration for the present, there is no reason to suppose that the States, either those which are wholly or partly in the Himalayas, or those which are in the plain, differ in any material respect from the British territory with which they are intermingled in regard to this habit. It hardly seems necessary to make any exception of the State of Nabha, where the hemp drugs are said to be prohibited. A continuous area of heavy consumption of charas is thus determined, comprising all those parts of the Punjab and North-Western Provinces lying between Lahore and Shahjahanpur. As regards bhang also, the description of the habit in the province must be held to apply to these States.

There is no official report from Bahawalpur, but the information which has been collected confirms the idea which is suggested by the position of the State, with reference to the Punjab and Sind, that it is a bhang-consuming country. Ganja is hardly used at all, and charas but little. The use of bhang is more common in the western than the eastern half of the State.

376. The figures of consumption of ganja given in paragraph 52 of the Excise Memorandum show since 1887-88 increase in every district except Hoshangabad and Narsinghpur. The decrease in these two districts is small; the increase in several districts is large. There may have been some increase in the habit in this period—a point which will be discussed later on; but the reports and evidence leave no doubt that the bulk of the increase in registered sale is due to improved administration and success in suppressing the use of the unexcised drug. This being the case, the figures of the last year, 1892-93, furnish a better basis for a survey of the consumption throughout the province than do the figures of any other year or of an average of years.

Central Provinces.

The statistics of 1892-93 relied upon.

The following table contains the material statistics of 1892-93 :—

Divisions.	Districts.	Population.	Maunds of ganja sold.	Number of persons per maund, approximate.	Number of consumers at rate of 64 tolas per head per annum.	Percentage of consumers to population.
Nagpur.	Nagpur	758,000	73	10,000	3,650	·5
	Bhandara	743,000	62	12,000	3,100	·4
	Chanda	698,000	23	30,000	1,150	·2
	Wardha	401,000	28	14,000	1,400	·3
	Balaghat	383,000	118	3,000	5,900	1·5
	Total ...	2,983,000	304	10,000	15,200	·5
Jubbulpore.	Jubbulpore ...	748,000	128	6,000	6,400	·9
	Saugor	592,000	33	18,000	1,650	·3
	Damoh	326,000	34	10,000	1,700	·5
	Seoni	371,000	79	5,000	3,950	1·1
	Mandla	339,000	52	7,000	2,600	·8
	Total ...	2,376,000	326	7,000	16,300	·7
Narbada.	Hoshangabad ...	530,000	60	9,000	3,000	·6
	Betul	323,000	23	14,000	1,150	·4
	Chhindwara ...	339,000	35	10,000	1,750	·5
	Narsinghpur ...	367,000	35	10,000	1,750	·5
	Nimar	253,000	19	13,000	950	·4
	Total ...	1,812,000	172	11,000	8,600	·5
Chhattisgarh.	Raipur	1,256,000	189	7,000	9,450	·8
	Bilaspur	778,000	108	7,000	5,400	·7
	Sambalpur ...	796,000	95	8,000	4,750	·6
	Total ...	2,830,000	392	7,000	19,600	·7
	GRAND TOTAL ...	10,001,000	1,194	8,000	59,700	·6

377. It will be seen from these figures that the area of heaviest consumption is the group of four districts, Balaghat, Seoni, Jubbulpore, and Mandla; and among these Balaghat uses the drug at double the rate of the other three. Next in order come the districts of the Chhattisgarh Division. After these the other districts along the northern frontier, Damoh, Saugor, Narsinghpur, and Hoshangabad, with the addition of Chhindwara. Then follow the districts on the western and southern frontiers, Nimar, Betul, and Wardha, with Nagpur and Bhandara. And far behind comes the district of Chanda. The first two of the above groups consume the drug at a higher ratte han one maund to 10,000 of the population; the last three at less. Saugoris is included in the second group in spite of its apparently light consumption, because the large difference between it and the neighbouring district of Damoh in this respect confirms the evidence of illicit import given by reports and witnesses. Nagpur is placed in the fourth group in spite of its heavy sale compared with the other districts of the same group, because the consumption is to some degree foreign to the district, being connected with the troops at Kampti and other people who are attracted to the capital of the province. The high rate of consumption in Chhindwara, Seoni, Balaghat, and Mandla may probably be associated with their physical characteristics and their very malarious climate, for they cover the central highlands of the province—a tract of mountains and dense forest.

The use of ganja compared by districts.

378. The evidence fixes the daily ration of ganja at about one-fourth of a tola. Making allowance for the custom of smoking in company, a lower rate ought probably to be adopted. And, on the other hand, the comparative cheapness and inferiority of the drug suggests a higher allowance than was thought appropriate for the Bengal calculations. The allowance of 64 tolas in the year, costing Rs. 5 to 8, or 50 consumers to the maund, appears to be a just medium. At this rate the number of consumers in the province would be about 60,000. A considerable share of the excise ganja is used as bhang under the name of *desi* bhang. It seems to consist of the leaves and bracts, and often perhaps of the flowers themselves, picked off the ganja stalks. A reduction has to be made on this account if the number of smokers only is to be ascertained. On the other hand, some addition has to be made for the use of smuggled ganja. It will perhaps be sufficient to regard 60,000 as the number of smokers of ganja, for the estimate does not pretend to exactness. This gives a percentage of ·6 on the population of 10,000,000.

Estimate of individual consumption of ganja.

379. The evidence on the point of increase or decrease of use is very contradictory. In full view of many of the witnesses is the fact of the great and steady increase of the revenue and registered consumption in seven or eight districts, and their opinion as to the growth or decline of the use are doubtless affected by it. It has been stated above that the Commission attribute this increase for the most part to improved administration. Many witnesses hold this view, and none controvert it. But there are some who think that the extended use of the drug has materially contributed to the enhanced revenue. The Judicial Commissioner, Mr. Neill, has discussed the matter rather fully. He believes that the use has increased because (1) he is so informed by natives of sound and sober judgment; (2) the consumption and revenue have been steadily growing up to date, whereas "if

Increase of use of ganja.

it was only that taxed ganja was substituted for untaxed and illicitly obtained ganja, the great increase would have shown itself in the earlier years after cultivation of the ganja-bearing plant was placed under restriction, imports watched, and all illicit cultivation severely punished;" (3) the increase has occurred notwithstanding that the price of ganja has been raised to five times what it was in 1875-76; (4) as high a still-head duty as possible has been placed on liquor, and ganja is comparatively a cheap and convenient, because portable, stimulant; and (5) the excise arrangements have advertised the drug and made it popular, and supplied a superior quality of it. These arguments include nearly all that have been urged by other witnesses, except the one that with those who seek a stimulant, the hemp drugs have the advantage over liquor that they are not prohibited by the Hindu religion. But after all Mr. Neill, like the vast majority of the witnesses all over India, appears not to speak from personal observation of the use. The evidence of Colonel Doveton, Conservator of Forests, is important as bearing upon the use of ganja among the jungle tribes. He describes this as more common than formerly. It is to be regretted that more information has not been furnished to explain the extraordinary high consumption in the Balaghat district, which must have a large population of the jungle tribes, and, it may be added, the great increase of the sale in the last five years. The construction of the Bengal-Nagpur Railway must have had considerable effect in the consumption of the districts through which it passes east of Balaghat. Special enquiries are being made by the Central Provinces Government regarding the increased consumption in the districts where it is most marked.

380. There are not wanting witnesses to assert that the use is on the decrease, and many believe that there is neither increase nor decrease. The statistics show that in ten districts there is either decrease or no very remarkable increase in the retail sale in the last five years. But the Commission, looking to the balance of evidence supported by the statistics, cannot resist the conclusion that increased use accounts in some measure for the general growth of the revenue and registered consumption. They note that in more than one place the increase of revenue is attributed in part to the supply of a superior quality of drug. That the Khandwa drug is superior may be the case, but there is evidence that the local produce is preferred in the extreme east of the province, and it is in these regions that the greatest increase has occurred.

Increase on the balance of evidence.

381. The supply of Khandwa ganja to the Feudatory States and zamindaris has steadily increased during the last ten years from 80 maunds to 273 (paragraph 66 of Excise Memorandum). The final figure represents a consumption by 13,650 smokers by the standard used for the calculations of the province. There is no evidence to show that the use has increased or decreased. The zamindars and feudatories had an ample supply of ganja of local growth before the Excise Department undertook to supply them, and it is possible that the old sources of supply of local growth are not yet quite closed, though the evidence shows the contrary.

Feudatory States. Extent of use.

382. In the Madras Presidency the only form of the drug which need be considered for the present purpose is ganja. Charas is only very exceptionally used, and there is no record of the amount imported. Bhang is not a distinct article from ganja. The liquid

Madras.

preparations, as well as the sweetmeats and electuaries, are made from ganja. Preparations of the latter class occupy a much more prominent place in the evidence of witnesses than they do in other parts of India, and this would suggest that they are in more common use.

The statistics of retail sale do not show the full consumption of ganja.

383. The statistics furnished by the Madras Government give 67,000 sérs as the retail sale of ganja for 1892-93. It has been ascertained that these are sérs of 80 tolas, and the registered consumption is therefore 1,675 Indian maunds. In a previous chapter it was estimated that the share of the Madras produce which stayed at home was 3,500 maunds. A considerable reduction has to be made from this on account of waste to arrive at the amount which actually goes into consumption. The general tenor of the Madras evidence must also be noted. The same general unfamiliarity on the part of the witnesses with the facts relating to consumption which has been found more or less all over India exists in Madras also, and perhaps to a greater degree. The returns of retail sales obtained from the shops cannot represent more than a portion of the consumption of the Presidency, for there is ample evidence to show that the drug is freely handed about, and it has been admitted in official reports that the consumption is much larger than was supposed.

Use of ganja in different parts of the Presidency.

384. The figures of retail sale place the districts in the following order as regards their rate of consumption: Madras, Kistna, Trichinopoly, Bellary, North Arcot, Tanjore, Malabar, Vizagapatam, Godavari, South Arcot, Madura, Salem, Cuddapah, South Canara, Coimbatore, Nellore, Tinnevelly, Chingleput, Ganjam, Anantapur, and Kurnool (Nilgiris no figures furnished). The evidence leaves the impression that the use is most common in the Northern Circars and gradually diminishes to the south until the Nilgiris are reached, where, according to some witnesses, the percentage of consumers on the population is high. The statistics and the evidence, therefore, do not agree; for, according to the former, Ganjam takes a very low place, while some southern districts are high on the list. It appears, however, from the evidence that the people of the northern hill tracts prefer opium, and consume little of the hemp drugs. The latter are used principally in Vizianagram and the seaport towns. The non-consuming population of the hill tracts would materially affect the rate of consumption as deduced from the figures. Kistna may owe its high position to other than strictly retail sales, as it is a district of production, and the same may be the case with North Arcot. Trichinopoly and Bellary have troops and probably heavy consumption in the cities to account for their retail sales being high. The position of Malabar is justified by the evidence as to the use in that part of the Presidency. The consumption of the City of Madras is probably indicated with fair accuracy by the figure of retail sale. It is lower than that of Bombay, which again is lower than that of Calcutta, the figures being—

Calcutta, one maund to	...	...	...	...	1,400
Bombay „ „	...	...	...	...	2,300
Madras „ „	...	...	...	...	4,900

The number of consumers of ganja.

385. Looking to the cheapness and comparative inferiority of Madras ganja, the average yearly allowance of the habitual consumer cannot be put at less than one full sér of 80 tolas, and the total number of regular consumers in the Presidency

would then come to about 72,000, or ·2 per cent. of the population. Attention has already been drawn to the apparent prevalence of the use of sweetmeats and other refined preparations concocted with ganja. The occasional use of these forms of the drug must extend to a very large share of the population over and above the number of regular consumers. There are also a certain number of drinkers of the liquid preparations.

Increase and decrease of use of ganja.

386. The preponderance of evidence is decidedly in favour of the view that the use of the hemp drugs is increasing. The causes assigned for increase are generally the same as those mentioned in other provinces, the high price of liquor taking a prominent place among them. The Collectors, however, are generally of opinion that the use is stationary or decreasing. When decrease is alleged, it is in most cases attributed to the restrictions brought about by the excise arrangements, the raising of the price of the drug, and the limitation of the number of places where it can be bought. The statements of witnesses Nos. 131 and 155 may be consulted on this point. It has also been pointed out that stray cultivation is being discouraged, though it has not been formally prohibited. Thus there are causes operating to modify the extent of use in both directions, and the Commission do not think that the evidence enables them to say which are the more potent, or to judge in any way what the actual consumption is.

Madras States.

387. The Travancore import has been estimated at 100 maunds, which would be sufficient for 4,000 consumers. The use appears to be more prevalent in the hilly and malarious tracts. Some alleged increase is attributed to the relaxation of religious sentiment in regard to the use of intoxicants and communication with foreigners. The information regarding the other States furnishes no facts of special interest.

Bombay.

388. Ganja is used in all parts of the Bombay Presidency, a large share of the consumption of it being in the form of sweetmeats and drink. Bhang is used in the Bombay City and the Northern Division. Charas is smoked in the City of Bombay only, and that in very small quantity.

Use in different parts of the Presidency of ganja.

389. The figures of retail sale of ganja are wanting in some districts and irregular in others, so that it may be doubted if they can lay claim to accuracy even in the districts where they appear to be complete. Such as they are, they make the various districts take approximately the following order as regards their consumption of ganja: Dharwar, Bombay, Kanara, Bijapur, Nasik, Satara, Poona, Ahmedabad, Surat, Ahmednagar, Belgaum, Broach, Sholapur, Khandesh, Panch Mahals, Kaira, and Ratnagiri.

Total consumption of ganja.

390. There are no figures for Thana and Kolaba. The total of the district figures of retail sale taken out as far as practicable by five years' averages, with an allowance made for Thana and Kolaba, comes to about 3,800 maunds. The total consumption has been estimated in a previous chapter at maunds 3,000, and it was thought that this was a liberal calculation. Before expressing any opinion from these figures as to the incidence of consumption on the population, it will be as well to examine the evidence as to individual consumption.

Individual allowance of ganja.

391. Mr. Almon, Assistant Collector of Abkari in Bombay, maintains that the moderate consumer of ganja spends two annas a day on his indulgence, and consumes one tola of the drug. This represents an annual consumption of over four sérs and an expenditure of Rs. 45, and only admits of ten consumers being supplied by each maund of the drug. The average sale of 258 maunds, with allowance for waste, only suffices therefore for 2,000 or 2,500 consumers. Some witnesses, but they are few, state that the daily allowance of a moderate consumer is above one tola. The majority of witnesses put it at less. The lowest limit is reached by the Collector of Ratnagiri, who gives one-sixteenth of a tola as the average daily allowance, and reports 8,000 consumers in the district, of which the average retail sales amount to 74 maunds—*i.e.*, more than 100 consumers per maund. The Collector of Ahmednagar has arrived at a mean of the above extremes. He caused "a hasty census to be taken throughout the district," with the result that the number of consumers in a population of 888,755 was found to be 6,134, or ·69 per cent. The Ratnagiri inquiries gave a percentage not very much higher than the above, but by means of a much lower individual allowance. In Ahmednagar the allowance of 6,134 consumers on a total retail sale of 154 maunds comes to about 40 consumers to the maund, or one sér per head per annum, or somewhat less than a quarter of a tola per diem. The weight of evidence would fix the daily allowance nearer to one-half than one-quarter tola. Mr. Ebden's enumeration probably therefore included occasional consumers, and possibly counted the same people more than once. The price of ganja outside Bombay ranges from three annas a pound in Satara to one anna a tola in Khandesh. One sér of ganja can never therefore cost more than Rs. 5, and the average price will be within the reach of all classes of consumers.

Number of regular consumers estimated.

392. Making allowance for a considerable share of the drug being used in the making of drinks, sweetmeats, and other preparations, which are for the most part consumed only occasionally, and for waste, the number of regular consumers in British territory alone cannot be less than 2,500 × 30, or 75,000, giving a percentage on the population of ·46. Besides these, there are the small body of regular drinkers of the hemp drugs and the occasional consumers of other preparations of the drug whose numbers cannot be estimated. The number of regular consumers in the Bombay City can hardly be less than 6,000.

Figures of retail sale not generally reliable as index of consumption.

393. Little reliance can be placed on the figures of retail sale, and in the present discussion they have only been utilised to range the districts in the order of their relative rate of consumption, and relied upon in the case of Ahmednagar because they were in fair accordance with the Collector's census of consumers and the experience gained in other provinces. The figures of retail sale in the Dharwar district are extraordinary. They show steady increase for years past, and have now reached a point which by the reasonable standard of individual consumption above adopted gives a percentage of over four of regular consumers on the population. This is impossible; there is no such consumption as this in any rural tract in the whole of India. The witnesses who speak with special knowledge of the district do not give anything like this percentage, and they do not confirm the evidence of the figures that there has been a remarkable increase of consumption in the last fourteen years. The

Collector of Dharwar has endeavoured to ascertain the causes of this increase, and whether it is connected with the decline in the consumption of liquor and toddy. He reports that he can trace no connection between the two phenomena; that there has been a large increase in the consumption of ganja, which is to be attributed to the introduction of the railway bringing with it scores of ganja smokers and eaters; that there is no reason to suppose that the people of the district have generally taken to the use of the drug, though a number of individuals may have contracted the habit from foreigners; and that there is no export of the drug. He attaches a statement showing that the retail sales of 1892-93 amounted to 1,345 maunds, an increase of more than 200 maunds over the figures of 1891-92. It is impossible to suppose that this huge amount can have been consumed in the district. It is larger than the whole consumption of the Central Provinces with its Feudatory States and zamindaris. The only reasonable explanation is that the greater part of it leaves the district, and enters the surrounding foreign territory, Hyderabad, Mysore, and Goa. The Kanara district also may possibly get its supply from the Dharwar shops. The Dharwari ganja is not unknown, as the Commission found, in Mysore. This exaggeration in the Dharwar figures furnishes one more reason for distrusting those of other districts as an index of the local consumption.

Increase and decrease of consumption.

394. On the point of general increase or decrease in the use of ganja, the responsible official witnesses, excepting the Collector of Bijapur, take the view that there is no perceptible change. On the other hand, there are witnesses of other classes who observe increase, and attribute it to the same economic and social causes as have been noticed in other provinces. But it may be noted that the high price of liquor does not take a prominent place among them, and many statements will be found to the effect that the hemp drugs are giving way to liquor. It cannot be said that there is a preponderance of the evidence either way or that there is any satisfactory basis for forming an opinion. The only causes of increase which can be assumed to have operated in the direction of increase are the increase of population and development of railways. The social causes would seem to tell both ways, education, however, being rather favourable to decrease of the habit than the reverse. The fact that the lower orders are addicted to liquor in the Bombay Presidency, and that their earnings are comparatively high and enable them to indulge this predilection, is a factor operating against increase of the hemp habit. Regarding bhang and charas, the tendency of the evidence is to show that the former is giving way to liquor; the use of the latter, practically confined to the City of Bombay and insignificant in extent, shows no sign of increase.

Bombay States.

395. The extent of use described in the Presidency may be accepted as applicable to the Native States under the supervision of the Bombay Government. There are no materials to enable a more exact estimate to be formed. In the Deccan and Southern Maratha Country ganja must be the favourite form of the drug, and in the Gujarat States, Kathiawar, and Cutch it is to a great extent superseded by bhang.

Aden.

396. The statistics show that about 40 maunds of ganja and 4 of bhang are consumed in Aden, of which the population is 42,734. This gives the high rate of ganja consumption of one maund to 1,000 of the population. The maximum price at which the contractor

is allowed to sell is one anna a tola, and there is no minimum. The average price is probably much the same as that of the shops in the Presidency proper. If the Bombay rate of 30 consumers to the maund be taken, the consumers are about 3 per cent. of the population, or one man out of every 8 or 10. Considering the character of the population, composed to a great extent of Indian sepoys and the followers of native regiments, the high figure is not surprising. There is reason to think that service abroad induces a more liberal consumption of the hemp drugs among native regiments and their followers.

Sind and Khairpur. Total consumption estimated of bhang.

397. The average production of bhang in Sind and Khairpur is about 4,000 maunds. The statistics give the average retail sale of the British districts as 4,539 maunds, and this does not include the consumption of Karachi, for which district no figures of retail sale are given. The population and circumstances of Karachi compared with both those of Hyderabad justify the assumption that at least 500 maunds are consumed in the former. The figure of total consumption of the province must be raised by this amount, and by 1,000 according to the statistics for the State of Khairpur. But looking to the population of Khairpur, this consumption appears excessive, and the retail sale probably includes locally produced drug sold for consumption in other districts of Sind. So also it is probable that the retail sale of the Shikarpur district, where there is a considerable area of cultivation, includes the drug which has been exported. This district has not as high a figure of population as Hyderabad, and yet is credited with double the consumption. Hyderabad has but a trifling area of cultivation, and its figures of retail sale are probably a fairly accurate index of the consumption. They give one maund to 820 of the population, or say 800, allowing a few maunds for defective registration. This rate applied to the whole population of Sind with Khairpur, about 3,000,000, gives a total consumption of 3,750 maunds, which approximates to the estimate of production based on the area of cultivation. The statistics on a six years' average show that about 650 maunds of bhang are imported, mostly into the Shikarpur district. The estimated consumption, 3,750 maunds, therefore, only falls short of the total supply, 4,650 maunds, by 900 maunds, which is not an extravagant allowance for waste.

Individual allowance. Number of regular consumers of bhang.

398. The average price of bhang is about Re. 1 a sér, and the average daily allowance 1 tola or about 4 sérs per annum. A maund therefore supplies about 20 regular moderate consumers. But the majority of the consumers take the drug only occasionally. The use in Sind—certainly in Upper Sind—is very like that of the Punjab and Northern India, where the beverage is drunk largely in the hot season, and to a comparatively small extent in the cold. It is probable that not more than one-third of the consumption can be credited to regular consumers, and that class would by this calculation number $1,250 \times 20 = 25,000$. The occasional consumers are very many times more numerous, and may not improbably amount to between 5 and 10 per cent. of the whole population. From this estimate the Thar and Parkar district is excluded, where the use of the drug is much less common than in the other districts of the province, its place being taken by opium.

Number of consumers of charas.

399. The retail sale of charas, making an allowance of 5 maunds for Karachi, where there are no figures, is about 43 maunds. The import, however, averages 70 maunds. The consumption may be taken to be 50 maunds. The average daily allowance appears

to be about ¼ tola, or ½ sér per annum. There would then be about 2,000 charas smokers in the province, and these are all regular consumers. The cost at the above rate is Rs. 12½ per annum, which is reasonable. The district of Shikarpur would seem to contain nearly half of the charas smokers.

Number of consumers of ganja.

400. The consumption of ganja is about the same as that of charas. The former is, however, the cheaper drug; the individual consumption is probably therefore larger, and the smokers less numerous. The use is most prevalent in Karachi and Hyderabad, and may be said not to exist in Shikarpur and the Upper Sind Frontier. Thar and Parkar consumes more ganja than charas, hardly any of the latter.

Increase of consumption.

401. The statistics do not furnish any reliable index of the growth or decline the use of either of the drugs. The evidence indicates increase, except in the case of ganja, but not very decidedly. The Commissioner (Mr. James) bears testimony by personal observation to the increase of the different classes of ascetics who principally are addicted to the drugs. Their number by the census of 1891 was 18,594. He is also of opinion that the use has spread among the labouring classes, whose wages have greatly risen in recent years. The addition to the population during the last 20 years, which amounts to over 30 per cent., must in the natural course of things have caused an increase of the total consumption.

Berar.

402. The memorandum of the Hyderabad Assigned Districts throws doubt on the figures of retail sale of ganja contained in column 44 of the statistical table. They show an average comsumption in the last five years of some 800 maunds. They are fairly regular, and, but for the discredit thrown on them by the memorandum, seem fit to be accepted as an index of consumption. It is true that the local production and import together amount to 1,300 maunds. But the drug in this form contains a great deal of useless material, and it is probable that when sold retail 1,300 maunds get reduced to 800. This is not so large a proportion of waste as was found in the Central Provinces. The imported drug seems to come from Khandwa, and it is not likely that the local ganja is a more finished product than that imported. If the consumption of Berar is to be compared with that of the neighbouring Central Provinces, where the figures of retail sale represented the consumption of the cleaned drug, it certainly cannot be taken to be more than 800 maunds; and probably this is a high figure. In Berar the price of the drug is one-fourth of what it is in the Central Provinces. It is probable, therefore, that the individual allowance is very much higher. The evidence puts it at ½ tola a day, or approximately 2 sérs per annum, which would cost Rs. 5. There would thus be 20 consumers to the maund and 16,000 in the province, giving a percentage of ·55 on the total population. The result is not far different from that arrived at in the Central Provinces. As regards the result and individual cost, it appears to be reasonable. The evidence regarding increase and decrease of use is of the usual contradictory character. The statistics throw no light on the point, for they are not correct as regards the retail sales, and, as regards the imports, are not in a suitable form for the purpose. The preponderance of evidence is in favour of increase, but the direct observation of a witness like (31), who says that the younger men rarely smoke, must go for something. If the evidence of the majority be accepted, it is nevertheless certain that the increase is not very marked.

403. The reports and evidence from Ajmere-Merwara furnish no statistics to enable an estimate to be made of the extent of use of the hemp drugs. There was an increase of revenue in 1890-91 which was explained in the annual excise report to be due to competition at the auction of monopoly. There is no evidence of any increase or decrease of use.

Ajmere-Merwara.

404. In Coorg the import of ganja amounts to 21 maunds and registered consumption to 14. The population is 173,055. The retail price is 14 annas to 1 rupee for a sér of 24 tolas, or approximately $\frac{2}{3}$ anna per tola. Taking the minimum individual allowance at $\frac{1}{4}$ tola or $\frac{1}{6}$ anna per diem, the annual individual consumption comes to 90 tolas, and the cost to something less than Rs. 5. This is a reasonable allowance. The consumers would number about 1,000, or between ·5 and ·6 per cent. of the population. It is probable that the consumption tends to increase with the influx of coolies into coffee and cardamom estates.

Coorg.

405. There is no information of the quantity of hemp drugs consumed in any part of Baluchistan. Bhang and ganja appear to come from India, and charas and chur ganja from Afghanistan as well as India. The Deputy Commissioner of Thal Chotiali reports that the Baluchis and Pathans of that district are not addicted to the drugs; but there is information from other quarters that the Baluchis and Pathans generally do smoke. The drinking of bhang would appear to be confined to Pathans and Indians. It is said that the consumption of the drugs is decreasing as the Indian population, which was larger when military operations were going on, is being reduced. The average prices seem to be Re. 1 for bhang, Rs. 20 for charas, and Rs. 78 for ganja per sér.

Baluchistan.

406. It has been shown that the hemp drugs, or ganja at least, are smuggled into Burma in considerable quantity. But it is impossible to say to what extent the Indians manage to supply their wants, or with any accuracy the price they have to pay for the drug. There does not seem to be any use by the Burmans or people other than the natives of India. The inquiries made by the Commission tend to show that the quantity introduced into the country is increasing.

Burma.

407. It is hardly worth while to examine in detail the statistics and evidence relating to the extent to which the hemp drugs are used in the great Native States and Agencies. These territories are surrounded and intermingled with British territories, regarding which the question has been fully discussed, with the result that the statistics were found in most cases to be far from an accurate index of consumption, and the evidence did not justify very precise conclusions. More definite results, or equally definite, will certainly not be obtained from the information supplied by Native States. The extent of use in each part of these territories may be taken to resemble that in the neighbouring British provinces. The use of ganja will be found to prevail over the States of the Central India Agency as it does in the North-Western Provinces, Bengal, and the Central Provinces. The use of bhang will be more common than that of the other drugs in Marwar and the north-western parts of Rajputana, and it will extend southwards towards the Bombay Presidency, and eastwards towards the States of Central India,

Hyderabad, Mysore, Rajputana, Central India, and Baroda.

gradually meeting with more competition from ganja. A moderate use of charas will be found all over the States which are within easy reach of the Punjab and the North-Western Provinces. The extent of use of ganja in Hyderabad will be fairly well indicated by the estimates of Berar, the Bombay Presidency, and Madras as regards the parts of the State contiguous to those provinces, and a similar process of examination will give the consumption of Mysore. In these two States bhang as a separate form of the raw drug has practically disappeared, but charas finds a few consumers in Hyderabad. Baroda consumption is the same as that of the northern part of Bombay Presidency.

Kashmir and Nepal.

408. In Kashmir and Nepal the wild plant furnishes the whole, or a very large share, of the consumption—a fact which renders useless for present purposes the figure of production given in the Kashmir evidence, and of import from Bengal into Nepal which can be derived from the Bengal statistics.

Army.

Real extent of the use of the hemp drugs not ascertained.

409. The inquiries made in the army have elicited replies from 274 regiments, batteries of artillery, and special corps in the service of the British Government and Natives States. If commanding officers had found it possible to take an accurate and complete census of the consumers of the hemp drugs among the sepoys and other natives attached to their corps, the result would have been of the greatest service in determining the extent to which the hemp drugs are used among the various races and castes and the population generally. But the cases are few in which the inquiry has elicited information on the point which has the appearance of being complete. It would therefore be misleading to compile and tabulate the results in statistical form. Several enquiring officers report that their men will not admit the use of the hemp drugs, though it is certain that they are taken to some extent. And in many cases there are special reasons for this reticence in addition to the disrepute attaching to the habit in native society generally. In some regiments the use of the drugs is directly prohibited, and in others the commanding officers, though they may not have gone this length, regard the consumers with distrust. It must be the case also that in some regiments the consumers are held in greater disrepute among their comrades than in others. In many it is apparent that the inquiry was distasteful to the men, and in some that the commanding officers were not very insistent in pressing it. Keeping in view these reasons for distrusting the figures, it will not be prudent to do more than indicate a few general features of the hemp drug habit as it prevails in the native armies.

Extent of use reported.

410. There are regiments in all three presidencies and in the Native States in which the hemp drugs in one form or other are shown to be used by 5 per cent. of the men and followers. Forty-nine out of the 274 corps come under this category, and the number evidently falls far short of the truth. In some corps the number of consumers is far higher than 5 per cent. In some corps the use, if the reports are to be taken literally, does not exist, or is quite infinitesimal, or is practically confined to the followers. The consumption in these corps is no doubt trifling in most cases, but it is difficult to accept it as fact as regards any regiment that the drugs are not used at all, especially in regiments of Sikhs, who are extremely partial to bhang.

Little evidence of excessive use.

411. As regards the character of the habit, the smokers are for the most part regular smokers, and the drinkers indulge occasionally, and principally in the hot weather. In these respects the habit resembles that of the civil population. It is natural that excess should be comparatively uncommon in bodies of men living under strict discipline. It has been found that even in the police, where the men have more personal liberty, the use of hemp rarely obtrudes itself.

Use of the different drugs.

412. The habit of drinking bhang is more prevalent in the corps serving in the north-western part of India, but it cannot be said that smoking is more common in one part than another. Charas is preferred in the comparatively small tract where it is cheap and easily procurable, and ganja is used elsewhere. Smoking is regarded as a protection against cold, and bhang drinking as a relief under the distress of very hot weather. The habit, therefore, varies according as regiments experience different conditions of climate, and it would seem that on service the number of smokers increases. The preparation of the drink, however, takes time, and requires certain ingredients which on service may not be obtainable. It is doubtful, therefore, if bhang drinking increases on service as smoking does, but the practice of chewing or eating the drug in a simpler form may very well take its place.

Use among principal castes of sepoys.

413. The Sikhs drink bhang and do not smoke; but it is reported of more than one Sikh regiment that the men do not use any of the drugs. In one regiment they have given up bhang for the good rum which the canteen supplies. The Gurkhas also prefer liquor, and rarely use the hemp drugs. The habit would seem to be more prevalent in the Gurkha regiments serving in Assam than elsewhere, but uncommon even there. The Rajputs and Purbhias seem to be more given to the drugs than other castes. There is some strictness among the Muhammadans in some of the regiments of the north of India in regard to both smoking and drinking of hemp; but in Madras they appear to have the full proportion of smokers among them.

Evidence indicates decrease of use in the army.

414. The very great majority of the replies state that the use of the drugs is decreasing, and among the 38 which take the opposite view, 13 do not refer to the troops, but to the civil population. Some replies also are not very definite. There are hardly more than 20 out of the 274 which can be said to be evidence on the side of increase. The actual facts on which increase is alleged are not often stated, but the commandant of a Bengal Cavalry regiment finds that 25 years ago not a man in the regiment used the drugs, while now some do, especially among the later enlisted men. The causes of increase, when they are stated, which is very rarely, are the cheapness of the drugs as compared with liquor, the speedy action and convenient form of charas, and the religious objection to the use of liquor. On the other hand, there is a strong body of evidence on the side of decrease. The cause which appears most prominently in the replies is the greater demand which service makes in these days on the time and intelligence of the sepoy. He cannot spare the time to indulge in the drugs, which involves the laborious preparation of bhang as drink, and the period of listlessness and incapacity which follows an ill-regulated dose either

as drink or smoke. And he is said to be conscious that the habit renders a man less fit for the things he has to do and learn. In many regiments the prohibition is credited with having had a decided effect in reducing the practice. In some it is said that the older men, who have the habit, are retiring, and making room for young men, who, entering the more intellectual school of soldiering, do not readily acquire it. This is in direct contrast with the evidence from a Bengal Cavalry regiment quoted above, and it is for this reason the quotation was made. Both opinions are apparently based on observation, and that in favour of decrease has a great number of adherents, while the officer who holds the other stands almost alone. The point is of general interest as touching on the quality of the modern recruit apart from the hemp question. The rise in the price of drugs is alleged in some quarters as a cause of decrease, and in others the cheapness of liquor. It is probable that liquor is competing with drugs in the army as it is doing among the better classes of the civil population.

Varieties of ganja.

415. Ganja issues from the Ganja Mahal of Bengal in three forms—flat, round, and chur. Their relative value arises from the fact that round ganja is more free of useless stick and leaf than flat ganja, and chur is even more pure than round ganja. The first two kinds are reduced to chur or fragments as a necessary preliminary to smoking, but it is possible that a small amount of leaf always adheres to the lumps of compressed flowers even when they have been detached from the stick. Nevertheless in this reduced form the three kinds are practically the same, and many persons have no preference in regard to them. The evidence on this point is not, however, unanimous, and in Calcutta, the 24-Parganas, Nadia, and the Burdwan and Orissa Divisions round ganja alone is sold, while the flat kind is consumed throughout the rest of the province. It is doubtful if this distribution is caused by any choice of the consumers. The explanation is probably to be found in the convenience and profit of the dealers in respect of the avoidance of waste and economy of carriage. The recent sudden increase in the consumption of chur tends to confirm this view, for Mr. Gupta explains that it was caused by the discovery that this kind was more lightly taxed in proportion to the amount of narcotic matter present in it. As regards their general use, therefore, these three kinds of ganja do not need to be distinguished, and the names even are not current outside Bengal. It may be said that every presidency, province, and almost every Native State outside Bengal, has a certain amount—it may be very small—of home-grown ganja. This drug is of various qualities, from the produce of the wild plant in certain parts to that of the skilled and regular cultivation. There are local names for the drug, but it is essentially the same everywhere, varying in strength and flavour. Bengal ganja holds the first place in public favour. In Assam it is distinguished by the epithet *mohini*. Only a small quantity of it goes out of Bengal to the North-Western Provinces and the peninsula of India, but the fame of it is carried all over the country by the religious wanderers, and its name *baluchar* is very widely known.

Manner of smoking ganja.

416. Ganja is used principally for smoking,—almost wholly for that purpose in Bengal, where it is so expensive. The process of preparing the drug for smoking, the kind of *chillum* or pipe that is used, and the manner of inhaling the smoke are the same all over India. A small quantity of ganja, about $\frac{1}{16}$ of a tola, is kneaded in the

palm of the left hand with the thumb of the right, a few drops of water being poured on it from time to time. When it ceases to part with any colour to the water, it is ready to be smoked. The *chillum* is a bowl with a short neck issuing straight from the bottom of it, all made of clay; the same that is commonly used for smoking tobacco. It is laid with a foundation of a small quantity of tobacco. On this is placed the washed ganja which has been chopped up and another thin layer of tobacco. A live coal is placed on the charged pipe, a damp cloth is generally wrapped round the neck of it and folded into the palm of the left hand, while the pipe is grasped by the neck between the thumb and first finger. The right hand is pressed, fingers upwards, against the cloth and neck of the pipe, and the draught is made through the space between the thumb and first finger of this hand. A few short breaths are blown and drawn to light up the pipe, and when this is accomplished one long deep draught is taken with the lungs. The pipe is then handed on to a companion, and so goes the round of the circle.

Manner of smoking charas.

417. In Bengal charas is only used by people in good circumstances. It is in the Punjab and North-Western Provinces that most is to be learnt about the ordinary method of consuming it. It varies in quality and price, and is often very much adulterated. It is almost wholly used for smoking. A quantity, not larger than is usually put into the ganja pipe, is buried or kneaded up in two or three times the quantity of tobacco in the form (*gurakhu*) in which it is prepared for smoking with the *huka*. The *huka* is then smoked in the ordinary way, the draught being taken into the lungs. Dry tobacco may be used instead of the prepared tobacco, and the *chillum* instead of the *huka*.

Other ways of smoking.

418. Ganja also is sometimes smoked in the *huka*, and other implements and means of smoking are mentioned. Thus in Bombay and the Central Provinces epicures occasionally use a pipe made of sugarcane in preference to the *chillum*. There are also certain rude expedients in vogue amongst jungle people for the smoking of tobacco, which are no doubt resorted to in connection with the hemp drug, and some of which appear in the evidence. The pipe bowl may be constructed in the ground, and a reed used to communicate with the mouth. A pipe or cigarette may be made with leaves. The leaf cigarette containing a mixture of tobacco and hemp leaves is spoken of in the Madras Presidency. A green branch of the *Euphorbia neriifolia* can be readily fashioned into a pipe, and is commonly used on emergency in the Satpura Hills. And in connection with the smoking of charas, there appears to be a custom at religious gatherings in Upper India for religious mendicants to sling a huge *chillum* containing a sér or more of the drug to a tree so that all comers may partake of it. Bhang, *i.e.*, hemp leaves, or the very inferior kinds of ganja or ganja refuse, is only smoked under the compulsion of poverty or want of the better article.

Mixture of spices in smoking.

419. The above are the simplest forms in which the drugs are smoked. But the well-to-do are fond of flavouring the pipe with spices. The mixture with tobacco has the effect of making the pipe burn properly and go further, and of diluting the smoke which is inhaled; but other explanations are given of the reason for using tobacco with the drugs. Spices give fragrance and flavour to the pipe, and possibly, some of them, pungency. Those commonly used are musk, mace, saffron,

cloves, cardamom, keori (the male flower of *Pandamus odoratissimus*), rose leaves, attar, nutmeg, ginger, betel-nut, and betel-leaves.

Mixture of potent drugs in smoking.

420. Powerful and noxious drugs are occasionally introduced into the pipe; but this practice is confined to excessive consumers, and among them to a mere proportion only, on whom hemp alone has ceased to produce the desired effect of exhilaration or stupefaction. The seeds of dhatura are by far the commonest ingredient of this class. The next place should probably be taken by opium, and then follow arsenic and nux vomica, aconite, and the root of *kanher* (*Nerium odorum* or *Thevetia neriifolia*, the latter of which is known among the natives as yellow *kanher*), and after these may be mentioned certain substances to which the consumers attribute poisonous or intoxicating properties, or at least the virtue of enhancing the potency of the hemp. Such are hemp seeds, the root of the cold-weather *jawari* (*sorghum* of the kind called *ringni* in the Central Provinces and *shalu* in Bombay), the root of rice, the juice of the *madar* (*Callotropis gigantea*), and the skins and poison of snakes; and, lastly, cantharides is sometimes mixed for a special purpose. It is said that the *jawari* root is sometimes soaked in liquor to increase its potency. In describing these admixtures, distinction has not been made between charas and ganja smoking because the use of the ingredients is a matter of individual caprice, and they do not form part of any recognized preparation of the hemp drugs.

Simple preparation for drinking.

421. As with smoking, so in the case of drinking, there is a common and simple form, and also various compounds more or less elaborate. The simple form is merely to pound the drug very fine with a little black pepper, add water according to the strength of the drink desired, and filter the decoction through a cloth. This beverage is sometimes made with the bhang composed almost entirely of the leaves of the plant, and sometimes, most commonly outside Bengal, the North-Western Provinces, and the Punjab, of the flower heads or mixture of flower and leaves that has come away in the course of the manufacture of ganja. It goes by different names in various parts of India. In Bengal it is commonly called bhang or siddhi; in the North-Western Provinces bhang, siddhi, or *thandai*; in the Punjab, Bombay, and Central Provinces bhang or *ghota*; and in Sind *ghota* and *panga* according to its strength. In Madras the simplest form of preparation seems to be very little used, but when it is, it is probably called bhang or subzi. The Madras preparation called *ramras* or *ramrasam* seems to correspond to the *dudhia* of Upper India. The common names may be taken to include all forms of beverage made from the hemp drugs, except those which have special names of their own.

Spiced preparations for drinking.

422. There is next a class of beverages in which the hemp drug and pepper are supplemented by harmless perfumes and spices, the whole enriched, it may be, with sugar and milk or curds. Every bhang drinker who can afford it adds some or other of these ingredients. The spices most commonly used are anise, fennel, coriander, dill, *ajwan* (*Ptychotis*), cucumber and musk-melon seeds, almonds, rose leaves, cloves, saffron, and cardamom. But many others of the same class of innocent ingredients are mentioned, *viz.*, hemp and poppy seeds, mace, mint, cummin, endive, parsley, musk, betel-leaves, keori, attar, cinnamon, lotus seeds, the seed of hollyhock, the kernels of pistachio and *charoli* (*Buchanania*

latifolia), asafœtida, liquorice, cubebs, chillies, and senna leaves. The juices of fruits and trees are also employed in the concoction, such as that of the pomegranate, grape, mango, bael, cocoanuts, and date (not toddy).

Mixture of potent drugs for drinking.

423. The above ingredients are used by all moderate consumers according to their taste and means. There are others which by their potency, their uncommonness, or their quaintness are designed to meet the craving of consumers whom the compounds in ordinary use fail to satisfy. Here again dhatura takes the first place, and evidence is not wanting that the seeds of this plant are sometimes kept in stock by the grocers who supply the other ingredients, if not by the sellers of the drugs. Besides dhatura, opium, arsenic, strychnine, aconite, the oleander root, and seed of black henbane are mentioned as being introduced into hemp drinks. A mixture of two or three of these with the hemp drugs in one or two forms, and perhaps one or two other fanciful ingredients, goes by the cant name of *panchratna* (the five jewels), *panchrangi*, or *panjtul*. The name is apparently applied to this sort of compound, and sometimes even to more innocent ones, whether it is to be used for eating, drinking, or smoking. The poison of copper is sometimes utilized by making the decoction in a copper vessel, or putting copper coins into it while it is being prepared.

Curious ingredients for drinking.

424. There is still another class of ingredients, which are used because they are believed to have a certain efficiency of their own, or to be instrumental in enhancing the power of the hemp drug. These are the roots of grass, of rice, and of jawar, the manna and rotten knots of bamboo, soot, cobwebs, decayed string, the juice of the *ak* (swallow wort), and the root of *mothk*. These are, of course, to be regarded as curiosities of the subject, though the mention of the *jawari* root is rather frequent. As in the case of smoking, cantharides is very rarely mentioned as an ingredient.

Use of hemp drugs with alcohol.

425. The hemp drugs are sometimes used to doctor alcoholic drinks. In the Punjab the name *lutki* is given to a concoction of this kind. In Baluchistan there is also said to be a drink called *mudra*, which is compounded of dhatura, bhang, alcohol, and opium. The drink is also known in the Punjab. In other quarters the hemp drugs are said to be smoked after drinking liquor to add to the intoxication. The evidence of the association of the hemp drugs with alcohol in these ways is fortunately scanty. The practice is probably rare, for it implies a recklessness in intemperance which is foreign to the Indian character.

Boja.

426. There is a liquid preparation of ganja in use in the Sholapur district of the Bombay Presidency which seems to be little known elsewhere. It is called *boja*, and its preparation is described by Bombay witnesses 25 and 47. The consumption is considerable, amounting in the year 1891-92 to 138,100 sérs. It appears to consist principally of a gruel made from *jawari*, and to contain a comparatively small proportion of hemp and a little nux vomica. After brewing, it has to be kept a day, when water is added, and it is drunk.

Hemp decoctions sometimes kept ready made.

427. Bhang drink is kept for sale in Karachi. Witness 5 from Sind says that the refreshment is prepared and kept in readiness to be supplied gratuitously for the use of visitors

and passers-by in almost all the places of worship. The same practice is indicated in the evidence of the manager of the *dharamsala* near Athari in the Punjab. Mr. Drummond describes a social custom of the same kind as prevailing among the Hindu Jats in the south-eastern districts of the Punjab.

Simple form of eating hemp.

428. Ganja and bhang are eaten as well as drunk. Charas, if medicinal uses be excepted, is very rarely consumed in any other way but in the form of smoke. The simplest form of eating ganja and bhang is to pound them up with such spices as were mentioned in the preparation of bhang, and to swallow the paste in the form of a bolus. The mass is sometimes compounded with molasses or *gur*. The leaves of the green plants are even chewed on occasion. It does not, however, appear to be a regular practice with any people in any part of India to consume the drugs in this manner. The habitual bhang drinker will do it when he has difficulty in preparing his drink. It is done on a journey. It would seem to be more common to eat the paste in the cold weather than the hot. A mass will sometimes be prepared and kept for use day by day. This paste is known in the Punjab, Berar, and Bombay as *fakki* or *fanki*, and it seems to be used by the poor not uncommonly.

Hemp sweetmeats.

429. There is, however, a very considerable consumption of sweetmeats made with ganja or bhang, or even sometimes charas. They are all prepared in very much the same way, their various names and properties depending on the proportion of the hemp drugs and other ingredients that they contain. Their basis is sugar and milk, and the essence of the hemp drug is extracted by the aid of heat, and compounded with them with other drugs and spices or perfumes. The most common of them is majum, and the preparation is known by that name from one end of India to the other. It is largely used at certain Hindu feasts. It is evidently credited with aphrodisiacal qualities. Many people consume it habitually, either throughout the year or in the cold season, abandoning it in the hot in favour of the liquid preparations. The names of other similar preparations are *yakuti* (in general use from the Deccan northwards), *purnathi* (Madras), *gulkhand* (Bombay), *shrikhand* (Bombay), *halwa* (in general use), and many others. These preparations are all considered to be aphrodisiacal, some to such a degree that they should perhaps be regarded as medicinal forms rather than articles of ordinary consumption. It is stated that in preparing these mixtures copper vessels are sometimes used or copper coins immersed in the process, and doubtless the toxic and tonic drugs mentioned in connection with the preparation of drinks sometimes enter into them.

Various ways of using hemp for consumption.

430. Hemp is sometimes compounded into cakes made of gram flour. It is used as a seasoning in the cooking of various dishes, those composed of meat as well as others. More than one witness in more than one province mentions this use at parties to make fun of the guests. A witness from the Punjab describes how powdered bhang is sometimes wrapped in dhatura leaves, the whole enclosed in a covering of clay and baked. It is not clear whether the cooked substance is eaten or drunk. It might be either. Witnesses, speaking of the northern part of the Bombay Presidency, state that gram and dates are sometimes charged with hemp. And in Calcutta the drug is occasionally used to flavour ice-cream.

CHAPTER IX.

SOCIAL AND RELIGIOUS CUSTOMS.

Scope of this Chapter.

431. In the instructions issued to the Commission by the Government of India, reference is made to the use of hemp drugs among fakirs and ascetics who are held in veneration by large classes of the people, and to the custom, which is believed to obtain to a large extent in Bengal, of offering an infusion of bhang to every guest and member of the family on the last day of the Durga Puja. The Commission were instructed to ascertain to what extent these and similar customs prevail in Bengal and other parts of India, and how far the use of hemp drugs forms a part of social, or possibly religious, ceremonial or observance. Questions 32 and 33 of the Commission's questions were intended to elicit information on these points.

Bengal.

432. In Bengal there is a considerable body of evidence dealing with these customs, and more particularly with the custom of offering an infusion of bhang on the last day of the Durga Puja. Some few witnesses, it is true, state either that no social or religious custom with which hemp drugs are connected exists, or that they are unaware of any such custom; but the great majority of the witnesses either give an account of them more or less full, or allude to them briefly as matters of common notoriety.

Durga Puja.

433. The custom of offering an infusion of the leaves of the hemp plant to every guest and member of the family on the Bijoya Dasami, or last day of the Durga Puja, is common in Bengal, and may almost be said to be universal. It is alluded to by many of the witnesses who refer to its use on this occasion as well as on other days of the Durga Puja festival. But, while there can be no doubt as to the existence of the custom, there is considerable divergence of opinion as to the true nature of it. The custom itself is a simple one. On the last day of this great festival the male members of the family go forth to consign the image to the waters, and on their return the whole family with their guests exchange greetings and embrace one another. During this rejoicing a cup containing an infusion of the leaves of the hemp plant is handed round, and all are expected to partake thereof, or at least to place it to the lips in token of acceptance. Sweetmeats containing hemp are also distributed. Opinion is almost equally divided as to whether the custom is a mere social observance, or whether it is an essential part of the religious ceremonial of the festival. There is difference of opinion among the witnesses as to whether there is any injunction in the *Shastras* rendering obligatory the consumption of hemp; but Tantric religious works sanction the use, and the custom, whatever be its origin, may now be said from immemorial usage to be regarded by many people as part of their religious observances. From the evidence of the witnesses it would appear that there is no specific direction in the *Shastras* of the manner in which the drug should be used, but from the references quoted it would appear that the use alluded to is that of bhang in the form of an infusion. Witnesses who can speak with authority on the subject, such as Mahamahopadhya Mahesa Chandra Nyayaratna, C.I.E., Principal of the Government Sanskrit College, Calcutta, testify to religious sanction for the use of bhang or siddhi, while many witnesses of high social position, well

acquainted with the habits of the people, as, for example, Maharaja Sir Jotindra Mohan Tagore, K.C.S.I., Maharaja Durga Charan Law, Raja Piari Mohan Mukharji, C.S.I., Rai Rajkumar Sarvadhikari Bahadur, Rai Bahadur Kanai Lall Dey, C.I.E., and others, speak to the prevalence of the custom, its intimate association with the religious devotions of the people, and the innocent harmlessness of the practice.

Other occasions on which bhang is used.

434. The custom described above, and which refers solely to bhang as distinguished from other preparations of the hemp plant, is the most important occasion on which bhang is used as a part of social or religious ceremonies; but there is evidence to show that the drug in this form is used at other festivals. For example, at the Holi festival, which is observed more generally in Behar than in other parts of the Lower Provinces, bhang is commonly consumed; and, according to many witnesses, at such festivals as the Diwali, Chait Sankranti, Pous Sankranti, Sripanchami, Sivachaturdasi, Ramnavami, and indeed on occasions of weddings and many other family festivities. But, so far as the evidence shows, the use on those occasions is a matter of social custom observed more generally in some parts of the province than in others, and, although no doubt there may be some who consider it essential to their devotions, partaking but little of the nature of general religious observance. In Orissa bhang is largely used by the attendants and worshippers at the temple of Jagannath at Puri; and there appears also to exist a custom, somewhat similar to that of the Durga Puja in Bengal, of offering siddhi or bhang in the form of sweetmeats to the god Ganesh, which are then eaten by the worshippers and their friends and relatives. This festival, called the Ganesh Chaturthi, occurs in the month of Bhadro (August-September).

Connection of ganja with the worship of Siva.

435. It is chiefly in connection with the worship of Siva, the Mahadeo or great god of the Hindu trinity, that the hemp plant, and more especially perhaps ganja, is associated. The hemp plant is popularly believed to have been a great favourite of Siva, and there is a great deal of evidence before the Commission to show that the drug in some form or other is now extensively used in the exercise of the religious practices connected with this form of worship. Reference to the almost universal use of hemp drugs by fakirs, jogis, sanyasis, and ascetics of all classes, and more particularly of those devoted to the worship of Siva, will be found in the paragraphs of this report dealing with the classes of the people who consume the drugs. These religious ascetics, who are regarded with great veneration by the people at large, believe that the hemp plant is a special attribute of the god Siva, and this belief is largely shared by the people. Hence the origin of many fond epithets ascribing to ganja the significance of a divine property, and the common practice of invoking the deity in terms of adoration before placing the *chillum* or pipe of ganja to the lips. There is evidence to show that on almost all occasions of the worship of this god, the hemp drugs in some form or other are used by certain classes of the people. It is established by the evidence of Mahamahopadhya Mahesa Chandra Nyayaratna and of other witnesses that siddhi is offered to the image of Siva at Benares, Baidynath, Tarakeswar, and elsewhere. At the Shivratri festival, and on almost all occasions on which this worship is practised, there is abundant evidence before the Commission which shows not only that ganja is offered to the god and consumed

by these classes of the worshippers, but that these customs are so intimately connected with their worship that they may be considered to form in some sense an integral part of it.

Trinath.

436. The special form of worship by the followers of Siva, called the Trinath or Tinnath Mela, in which the use of ganja is considered to be essential, is mentioned by many witnesses, and deserves more than a passing notice. A full account of this religious practice given by Babu Abhilas Chandra Mukharji will be found in Vol. III Appendices of this Report. The origin of the rite, which it is said sprang up first in Eastern Bengal, appears to be of recent date, about the year 1867. It appears to be observed at all times and at all seasons by Hindus and Muhammadans alike, the latter calling it Tinlakh Pir. When an object of special desire is fulfilled, or when a person recovers from illness, or a son is born, or a marriage or other ceremony is performed, the god Trinath, representing in one the Hindu trinity, is worshipped. Originally one pice worth of ganja, one pice worth of oil, and one pice worth of betel-nut was offered to the god. But now ganja—it may be in large quantities—is proffered, and during the incantations and the performance of the ritual it is incumbent on all present to smoke. This form of worship is shown to have spread extensively throughout Eastern Bengal andthe Surma Valley of Assam, and, according to one witness, it has penetrated even to Orissa. On the other hand, there are a few witnesses who say that the practice is gradually dying out.

Muhammadans.

437. The use of hemp drugs is as a rule in no way connected with orthodox Muhammadan observances, whether social or religious. The Muhammadan religion condemns such practices.

Assam.

438. In Assam, where the use of hemp drugs is but little practised by the Assamese proper, there appear to be no indigenous customs connected with the drugs. But the customs prevailing in Bengal are also found in Assam. There is evidence as to the use of bhang or siddhi at the Durga Puja, and of ganja by the worshippers of Siva. In Sylhet the Trinath form of worship appears to prevail to a considerable extent. With reference to this practice, one witness (Prasanno Kumar Das) observes that "in the Surma Valley ganja is offered in the name of Pir (Muhammadan saint) for the benefit of the cattle."

North-Western Provinces.

439. In the North-Western Provinces, where the celebration of the Durga Puja is not so generally observed as in Bengal, a considerable number of witnesses (some fifty in all) state that there are no customs, religious or social, with which these drugs are connected. But, on the other hand, there is overwhelming evidence to establish the almost universal use by the people of bhang at the Holi festival, and some evidence as to the common use of ganja by certain classes of the followers of Siva at their festivals and seasons of worship. Of the witnesses who speak to the use of ganja in connection with religious observances, 22 state that it is essential and 92 that it is not essential. As to whether the use of bhang should be regarded as a purely social custom or as essential to religious observance, the opinion of witnesses who speak on the point is about equally divided. It is sufficient

to say that the custom is now a general one, and that where the Holi festival is observed, there the practice of consuming bhang during its observance is common. On other occasions, such as the Diwali festival, marriages, and family festivities, there is evidence to show that among certain classes the consumption of bhang is common. Allusion is also frequently made to the habit of using bhang, to which, for example, the Chaubes of Mathra and Brindaban are notoriously addicted, but how far the habit is connected with the religious observances at the temples the evidence does not justify the formation of an opinion. A custom is mentioned by a Kumaon witness, Dharma Nand Joshi, who states that a class of people called *Kouls*, who worship spirits, meat, fish, etc., have the bhang plant as one of the objects of their worship.

Punjab.

440. In the Punjab there is evidence as to the general use of hemp by some of the followers of Siva, and especially of bhang, at the Holi, Dasehra, Diwali, and other festivals, and on the occasion of marriages and other family festivities. Among the Sikhs the use of bhang as a beverage appears to be common, and to be associated with their religious practices. The witnesses who refer to this use by the Sikhs appear to regard it as an essential part of their religious rites having the authority of the Granth or Sikh scripture. Witness Sodhi Iswar Singh, Extra Assistant Commissioner, says :—

"As far as I know, bhang is pounded by the Sikhs on the Dasehra day, and it is ordinarily binding upon every Sikh to drink it as a sacred draught by mixing water with it.

"*Legend*—Guru Gobind Singh, the tenth guru, the founder of the Sikh religion, was on the *gaddi* of Baba Nanak in the time of Emperor Aurangzeb. When the guru was at Anandpur, tahsil Una, Hoshiarpur district, engaged in battle with the Hill Rajas of the Simla, Kangra, and the Hoshiarpur districts, the Rajas sent an elephant, who was trained in attacking and slaying the forces of the enemy with a sword in his trunk and in breaking open the gates of forts, to attack and capture the Lohgarh fort near Anandpur. The guru gave one of his followers, Bachittar Singh, some bhang and a little of opium to eat, and directed him to face the said elephant. This brave man obeyed the word of command of his leader and attacked the elephant, who was intoxicated and had achieved victories in several battles before, with the result that the animal was overpowered and the Hill Rajas defeated. The use of bhang, therefore, on the Dasehra day is necessary as a sacred draught. It is customary among the Sikhs generally to drink bhang, so that Guru Gobind Singh has himself said the following poems in praise of bhang: 'Give me, O Saki (butler), a cup of green colour (bhang), as it is required by me at the time of battle' (*vide* 'Suraj Parkash,' the Sikh religious book).

"Bhang is also used on the Chandas day, which is a festival of the god Sheoji Mahadeva. The Sikhs consider it binding to use it on the Dasehra day. The quantity then taken is too small to prove injurious."

As Sikhs are absolutely prohibited by their religion from smoking, the use of ganja and charas in this form is not practised by them.

A unique custom of dispensing bhang at a religious charitable institution is that mentioned by witness Baba Kirpa Singh. The institution, as a relic

of old Sikh times, is annually permitted to collect without interference a boat load of bhang, which is afterwards distributed throughout the year to the sadhus and beggars who are supported by the *dharamsala*.

Central Provinces.

441. The evidence as to social or religious customs in the Central Provinces is somewhat discrepant, but on the whole points to the existence of customs akin to those existing in the North-Western Provinces. The use of bhang at the Holi and Diwali festivals and at marriages and such occasions, and of ganja or bhang in connection with the worship of Siva, is frequently mentioned by the witnesses. A few local customs are also mentioned by some witnesses. Regarding a custom of the Chamar caste, the Rev. Mr. Jacob says: "At Chanda, the Chamars use ganja dust in the preparation of a beverage called *gulabpani*, which is drunk at a ceremony called *dadhi* (the first shaving of the beard), when no liquor is permitted." Among the Gonds, Cowasjee Nusserwanjee Hattidaru describes the following custom as existing: "In the funeral ceremony amongst the Gonds of these provinces, *kalli* or flat ganja is placed over the chest of the dead body of the Gond, and when the funeral party returns home, a little of the ganja is burnt in the house of the dead person, the smoke of which is supposed to reach the spirit of the dead." Another Satpura witness, Hosen Khan, mentions a custom of offering "a little ganja at the Chitarai Debis, or collections of stones with rags tied to some tree above. They offer either a cock or a cocoanut or some ganja. It is a custom among travellers. These Chitarai Debis are in the open, and the travellers have a smoke at the same time." One witness states that he has heard of the hemp plant being worshipped in the Berars, but this is not corroborated by any of the witnesses from these districts. Another has heard that the Gonds in their hill homes are worshippers of the plant.

Madras.

442. In the Madras Presidency, where the use of hemp drugs is less common than in most other provinces, many witnesses assert that there are no customs, social or religious, with which they are connected, and the evidence as a whole fails to establish the prevalence of any customs so general as those connected with the Durga Puja and the worship of Siva in Bengal or the Holi festival in the North-Western Provinces. But there is evidence as to the existence of customs of a less general or widespread nature. In Ganjam, the witnesses speak to the common use of bhang on the *Mesha Sankranti* day in honour of Siva and Anjanayya, and also in the worship of Durga. Several also allude to a custom of offering a confection or draught containing bhang to the image at the temples of Hanuman. At the festival of Kama, the Indian cupid, bhang is freely made and drunk according to several witnesses. The Rajputs or Bondilis are particularly referred to in connection with this custom. On occasions of holidays or gala-days, and at the Mohurram, a number of witnesses say it is usual for Muhammadans as well as Hindus to take bhang. It is also said that various intoxicants, including ganja, are sometimes offered to the gods in worship, and then swallowed by those offering them. Witness M. Sundaram Iyer, Deputy Tahsildar (60), says: "Some of the lower orders make use of ganja as an offering, like cocoanut, plantains, liquor, and such other articles, for certain deities, such as Mathuraveeran, Muniappan, etc., according to the vow taken by each person. This

cannot be considered as essential, but is only a practice observed in very rare cases. Such practice is not followed by many people, and it is not injurious." Others allude to the offering of ganja to Karuppannam, Kali, Mathuraveeran, Muniappan, Karuannaswami, and Aiyaswami, more particularly in the south of the Presidency. Mr. Azizuddin, Sahib Bahadur, Deputy Collector, says: "Neither the Musalman nor the Hindu religion requires the use of these drugs on religious occasions. On the other hand, it is prohibited. Nevertheless, in the *maths* of bairagis, such as at Tripati, and of Muhammadan saints, such as at Nagore, Conjeveram, Arcot, and other places, the manager of the shrine distributes ganja to all the fakirs who assemble during the festival. In none of these places, religiously speaking, ganja should be distributed, but, according to custom among the fakirs, its distribution is essential." The Rev. Mr. Campbell says that ganja is used in connection with the funeral ceremonies observed by certain classes, but that the use is not essential. Mr. Merriman alludes to a custom of offering and consuming bhang at the funeral of bhang consumers.

443. An interesting note, entitled "The Religion of Hemp," by Mr. J. M. Campbell, C.I.E., will be found in Vol. III Appendices. In the Bombay Presidency the use of hemp in connection with the worship of Siva, Mahadev or Shankar appears to be very common. It is referred to by many witnesses. The following description of this custom as prevailing in part of Gujarat, Kaira, and probably Ahmedabad has been furnished to the Excise Commissioner by Mr. B. E. Modi, Deputy Collector:—

Bombay.

"On the Shivratri day (the last day but one of the month of Magh), sacred to the god Mahadev or Shankar, bhang water is freely poured over the *lingam*. Mahadev is an ascetic, and is fond of bhang, and on this day it is considered a religious duty to offer him his favourite drink. From this day to the 11th day of Ashad, on which day gods go to sleep, water is kept constantly dripping upon the *lingam* of Mahadev from an earthen pot kept above it."

Somewhat similar accounts varying in detail are given by many witnesses coming from different parts of the province, of whom some also refer to the habit which ganja smokers have of invoking the deity before placing the pipe to their lips. Others also refer to hemp as required in the worship of Baldeo and to its use at the Shimga or Holi festival. The Marwaris and some other classes appear to use bhang at marriages and other festivities. Mr. Charles, Collector of Belgaum, says that among Musalmans and Marathas the ganja plant is offered to dead relatives who used it in their lifetime at the time of the anniversary ceremonies of their death. There appears to be no special custom of worshipping the hemp plant itself. R. K. Kothavale, of Satara district, says the hemp plant is worshipped by one sect only, namely, by people from Northern India and Nepal, while Mr. Lamb, Collector of Alibag, remarks that some of the Kunbis who make offerings to the local divinities of their fields at the harvest season include a small quantity of ganja in the offerings.

444. In Sind the customs, both religious and social, appear to be much the same as in Bombay. In Karachi and some other places bhang is generally offered to all comers on occasions of marriages, panchayats, and other gatherings; and the custom of

Sind.

freely distributing bhang as a charity to all who care to partake is common both at temples and at other places of resort.

Berar.

445. In Berar there is evidence as to the use both of ganja and bhang at the Shivratri and Holi festivals and at social gatherings. The hemp plant itself is not worshipped, but, according to one witness, when a consumer dies, the plant is kept near his corpse during the funeral ceremony.

Ajmere-Merwara.

446. At the Holi and the Shivratri and at family festivities the drugs, especially bhang, are used.

Baluchistan.

447. Major Gaisford, Deputy Commissioner, states that among the Hindu sect called Bam Bargis the consumption of bhang is regarded as essential.

Native States.

448. From Native States there is but little information regarding customs, either social or religious, with which these drugs are connected. No purely local or indigenous customs have been brought to the notice of the Commission, but there is sufficient information to show that practices similar to those existing in British provinces at the Holi and Shivratri festivals and on occasions of family rejoicings are observed by certain classes of the people in many Native States.

Worship of the hemp plant.

449. The custom of worshipping the hemp plant, although not so prevalent as that of offering hemp to Siva and other deities of the Hindus, would nevertheless appear from the statements of the witnesses to exist to some extent in some provinces of India. The reason why this fact is not generally known may perhaps be gathered from such statements as that of Pandit Dharma Nand Joshi, who says that such worship is performed in secret. There may be another cause of the denial on the part of the large majority of Hindu witnesses of any knowledge of the existence of a custom of worshipping the hemp plant in that the educated Hindu will not admit that he worships the material object of his adoration, but the deity as represented by it. The custom of worshipping the hemp plant, though not confined to the Himalayan districts or the northern portions of India alone, where the use of the products of the hemp plant is more general among the people, is less known as we go south. Still even far south, in some of the hilly districts of the Madras Presidency and among the rural population, the hemp plant is looked upon with some sort of veneration. Mr. J. H. Merriman (witness No. 28, Madras) says: "I know of no custom of worshipping the hemp plant, but believe it is held in a certain sort of veneration by some classes." Mr. J. Sturrock, the Collector of Coimbatore (witness No. 2, Madras), says: "In some few localities there is a tradition of sanctity attached to the plant, but no regular worship." The Chairman of the Conjeveram Municipal Board, Mr. E. Subramana Iyer (witness No. 143, Madras), says: "There is no plant to be worshipped here, but it is generally used as sacrifices to some of the minor Hindu deities." There is a passage quoted from *Rudrayamal Danakand and Karmakand* in the report on the use of hemp drugs in the Baroda State, which also shows that the worship of the bhang plant is enjoined in the *Shastras*. It is thus stated: "The god Shiva says to Parvati—'Oh, goddess Parvati, hear the benefits derived from bhang. The worship of bhang raises one to my position,' etc."

In *Bhabishya Puran* it is stated that "on the 13th moon of Chaitra (March and April) one who wishes to see the number of his sons and grandsons increased must worship *Kama* (Cupid) in the hemp plant, etc.".

General conclusions.

450. In summing up their conclusions on this chapter, the Commission would first remark that charas, which is a comparatively new article of consumption, has not been shown to be in any way connected with religious observance. As regards Northern India, the Commission are of opinion that the use of bhang is more or less common everywhere in connection with the social and religious customs of the people. As regards ganja, they find that there are certain classes in all parts, except the Punjab, who use the drug in connection with their social and religious observances. The Commission are also of opinion in regard to bhang that its use is considered essential in some religious observances by a large section of the community, and in regard to ganja that those who consider it essential are comparatively very few. The Commission have little doubt that interference with the use of hemp in connection with the customs and observances above referred to would be regarded by the consumers as an interference with long established usage and as an encroachment upon their religious liberty. And this feeling would, especially in the case of bhang, undoubtedly be shared to some extent by the people at large. Regarding Southern India, the same remarks apply with this reservation, that the difference between ganja and bhang as materials for smoking and drinking respectively is much less marked there, and the distinction between the two forms of the drug is much less clearly recognised, although by the term "bhang" is generally meant the drug as used for drinking, and by "ganja" the drug as used for smoking.

CHAPTER X.

EFFECTS—GENERAL OBSERVATIONS.

Prevailing ignorance of the effects.

451. There has been some difficulty in obtaining definite information regarding the effects of hemp drugs. This difficulty has not arisen from any unwillingness on the part of witnesses to tell what they know. The Rev. Thomas Evans (North-Western Provinces witness No. 229) has stated that "native officials (and even barristers and pleaders) are afraid to give evidence lest they should thereby give offence to the Government." The Commission have had no experience of this kind, and a perusal of the evidence will show that this alleged hesitation on the part of certain persons to give evidence must have been very exceptional. Witnesses are found among all classes, not excluding even drug vendors themselves, who have made strong statements against the drugs. The difficulty has arisen from the general ignorance of the subject which has not hitherto attracted special attention. One result of the labours of the Commission has been to show how much ignorance prevails regarding the consumption of these drugs and their effects. This ignorance is not confined to Europeans. It extends to a large number of native witnesses. It is not confined to those who live apart from the common people. It extends to many whose duties are believed to bring them into close and constant contact with the people. Not a few persons who were asked to give evidence declined to do so, and others did so somewhat reluctantly, on the ground that they had little or no experience of the consumption of the drugs. To quote a non-official witness on this point, the Rev. George Pittendrigh (Madras witness No. 160) says: "I have been in India for nine years. I had hardly heard the name of ganja. I had heard it occasionally in connection with bandymen and coachmen, and so on, but I had (so far as I know) seen none of its effects. I had heard that they were similar to opium—a narcotic or intoxicant. That was all I knew. It was not till after I heard of the Commission that I made any special enquiry into the matter. I enquired first of Europeans and respectable natives, students and others, graduates and other men of some standing. No one seemed to know anything about it. The ordinary caste native seemed only to know in a general way that it was used by Muhammadans, bairagis, loafers, and ruffians. Europeans seemed to know nothing of its use." The above is by no means an exceptional statement. Much the same evidence is given by officials as well as non-officials, and by natives as well as Europeans. It is not confined to one province, but is given all over India. This state of things is not difficult to explain. As a matter of fact, it is not usual for those who use the drugs, especially those who smoke them, to do so in the presence of others. It is usually only the dissipated who make a practice of publicly using intoxicants. The moderate consumer is generally known only to those who have occasion to join him at his meals or at the times when he takes his regular dose. In this country there is this additional fact to be considered, that custom is distinctly against smoking in the presence of any one who is in any sense superior or entitled to respect. Thus it would be only rarely that a man would smoke in the presence of a neighbour who had not specially come to join him. As to the casual smoker on the street or elsewhere, the passer-by would probably not know that he was consuming hemp drugs; for he smokes the drug as a rule in the same manner as he would smoke tobacco, and also mixed with tobacco, which to a certain extent

conceals the smell. On the whole, then, it is easily intelligible that respectable persons should have a very limited knowledge of the consumption of hemp drugs, and especially of the smoking of ganja and charas, except by dissipated or excessive consumers. As might have been anticipated from a careful consideration of the circumstances, the experience of a large number of witnesses, even of those who have seen something of the use of the drugs, is found to be confined to having seen palki-bearers or boatmen smoke in the midst of hard work, or to occasionally seeing a friend indulge. Some other witnesses have only known the habit as practised by such persons as fakirs or by dissipated persons who consume to excess. Some have only seen the drug used when they have gone in the way of duty, or, in pursuance of this inquiry, to shops or other places where smokers resort. The witnesses are very few who have any extensive and accurate acquaintance with consumption. Witnesses were specially warned to confine themselves to what they actually knew, and efforts were made, wherever the evidence seemed to require it, to ascertain whether they had done so.

Bias of certain witnesses.

452. In estimating the value of the evidence as to effects, this generally very limited acquaintance with the subject on the part of the witnesses has had to be borne constantly in mind. It has been necessary to decline to accept strong or dogmatic statements on one side or the other without taking pains to ascertain on what basis of fact and actual experience they have been founded. This careful inquiry into the actual basis of statements made has been found necessary also in consideration of the different points of view from which such a question as this may be regarded. Some witnesses know only the medicinal use of the drugs, and are prepared to say nothing but good of them, being really ignorant of their use as intoxicants. They know only the use of the drugs as remedial agents, carefully prescribed when necessity arises, or used as a domestic remedy in certain minor ailments. This use is sometimes confounded with the use of the drugs as stimulants or intoxicants. These uses ought to be very carefully discriminated. There are also witnesses who do know the use of the drugs as intoxicants, but know only the moderate use. These have nothing stronger to say of the drugs than would be said of alcohol by the man who only had seen a glass of wine taken at his own table or at the table of a friend. He knows nothing of the effects of excess. Others again have only experience of excessive consumption. The moderate consumer has not attracted their attention. The ruin wrought in certain cases by excess has alone attracted their notice. They feel towards these drugs as that man feels towards alcohol whose experience has been mainly gained among the social wrecks of the lowest parts of a great city. In view of all this, the Commission were careful to do what they could to ascertain the basis of the opinions and closely to examine the facts laid before them. Striking statements made by some of the most careful and intelligent witnesses as to the change in their views when they became aware of the great extent of the moderate consumption of these drugs, the effects of which they had only seen in cases of deplorable excess, will be referred to later on in dealing with insanity and other effects. This ignorance of the effects of hemp drugs on the part of some able, intelligent, and benevolent men, however it may be explained with reference to the above considerations, must still be regarded as indicating that the injury caused by the drugs is comparatively trifling. It must have attracted more attention had evil effects been at all common in comparison with the extent of consumption.

Ganja and charas compared.

453. Before proceeding to discuss the evidence regarding the effects produced by the drugs, it will be well to notice briefly one or two preliminary questions. One of these is the different effects of the different forms of hemp drugs. Witnesses were requested to compare the effects of ganja and charas, and there is a considerable body of evidence on this subject. Inasmuch as charas is theoretically the pure resin extracted from the hemp plant, and the resin is the active principle in all varieties of the drug, it might be expected that this would be everywhere the strongest form in which the drug is found. But the evidence is not all to this effect. Charas is but little known in Bombay, Madras, Assam, and Burma; and ganja is but little known in the Punjab. In these five provinces, therefore, but few witnesses institute any comparison; and though there are some who have seen the effects of these drugs in different parts of India, yet the views of the majority of witnesses from these provinces who do institute the comparison must of necessity have but little weight. In the North-Western Provinces, the Central Provinces, and Sind, where both drugs are more or less known, the great majority (six to one) of those who make any distinction in strength between these two forms declare that charas is the stronger. In Bengal, on the other hand, a majority (two to one) of those who discriminate regard ganja as the stronger. Even in these provinces, however, the evidence cannot be accepted with confidence, for it is not usual for ganja and charas to be smoked by the same person. The evidence shows clearly enough that there is no essential difference between charas and ganja, but that the former takes in the Punjab and in parts of the North-Western Provinces the place among intoxicants which is taken by ganja in other parts of India. The only difference in regard to their effects apparent from the evidence is that some witnesses assert one form to be stronger than the other. There are, however, differences of opinion among the witnesses as to which is the stronger. The importance of these differences of opinion perhaps lies mainly in the necessity for explaining them. There are two general reasons why some of the witnesses might erroneously regard charas as weaker than ganja—*viz.*, (*a*) that the effect of each smoke depends on the amount of the drug used, and difference of experience as to this has admittedly led to difference of view regarding the drugs; and (*b*) that the consumers of charas in Bengal are of the higher class, and would naturally speak in favour of their own drug. There are also two reasons why charas may actually compare less favourably with ganja in Bengal than elsewhere—*viz.*, (*a*) that charas undoubtedly deteriorates by keeping, and also appears to be largely adulterated for the market; and (*b*) that the Bengal ganja, being more highly cultivated and more carefully prepared, reaches the market a better article than the ganja of any other province. There is no evidence of any other difference between these two forms of hemp drugs except one of degree; and this difference of degree does not appear to be at all a certainty everywhere. The experiments conducted by Dr. Evans and Mr. Hooper are reported in Vol. III Appendices. They indicate that charas from various sources may contain from 44·5 to 18·45 per cent. of resin soluble in alcohol, while Bengal round ganja affords 21·6 per cent. The physiological value of the alcoholic extracts is not, however, the same in all samples of charas compared with that obtained from Bengal ganja. In only one sample of charas were the effects produced comparable to those produced by a similar dose of the alcoholic extract of the "standard" ganja. The resin extracted from the other samples of charas was much weaker, doses varying

from $\frac{1}{100,000}$ to $\frac{1}{5,000}$ part of the body weight being required to produce certain physiological effects, while in three samples of Nepal charas doses equal to $\frac{1}{2,500}$ part of the body weight were inactive. These startling figures seem to indicate not only natural deterioration, but also extensive adulteration of charas.

Flat, round, and chur ganja.

454. The evidence recorded regarding the effect of the three preparations of ganja (round, flat, and chur) shows clearly that if their effects differ (which is doubtful), the difference is not in kind, but only in degree. There is no difference whatever in kind, and the difference in degree is trifling. Round ganja is practically unknown except in Bengal. There the great majority of the witnesses say that there is no difference even of degree between round and flat ganja. Only forty-one witnesses draw any distinction, and these are pretty equally divided. Some, indeed, think that the manner in which the round ganja is rolled retards deterioration; others that the close packing of the flat ganja has the same effect. The truth seems to be that the preference for one or other of these two preparations is purely a matter of habit and varies in different districts, and that there is little real difference between the effects of these preparations. This is borne out by the experiments conducted by Dr. Prain (*vide* his report on the cultivation of ganja submitted to the Bengal Government in 1893) and by those of Mr. Hooper, though these two sets of experiments differ somewhat in result. Dr. Prain gave the average percentages of resin extracts from Bengal round and flat ganja for the seasons 1889 to 1893 as 22·27 and 22·13 respectively. His specimens had been reduced to the state of chur. Mr. Hooper found chur to afford 25·90 per cent. of resin extract compared with 23·8, 22·6, and 21·8 for small flat, large flat, and round ganja respectively.

In respect to chur the evidence is very much divided and uncertain in tone. So far as it goes, it tends to show that Bengal is the only province where chur is regarded as at least as strong as the unbroken ganja. The explanation of this diversity of opinions is simple. Chur is broken ganja; and ganja may be broken either purposely or accidentally. In many parts and by many witnesses chur is regarded as the broken or refuse ganja which becomes separated in the process of preparation or transport, and which "even the poor will not buy." A second class of witnesses know chur as the best parts of the ganja heads, separated carefully from the woody matter or stalks, and therefore stronger, bulk for bulk, than the ordinary article. A third set of witnesses point out that before being smoked ganja must be broken; it must become chur before being used. These insist, therefore, that there is no real difference between chur and other ganja. It may be noted, however, that there seems good ground to believe that chur as packed at present deteriorates more rapidly than the unbroken ganja, and is therefore less popular in at least the more distant markets.

Smoking and drinking or eating.

455. The question as to whether the smoking of hemp is more injurious than drinking or eating the drug is of importance mainly in connection with the difference between ganja or charas and bhang. The form in which the question was put by the Commission raised two comparisons—*viz.*, (*a*) between the smoking and eating or drinking of the same preparation, and (*b*) between smoking one preparation and eating or drinking another. But unfortunately there has been some confusion in the answers, some witnesses having manifestly and others presumably overlooked

this distinction. At the same time it cannot be said that the evidence is practically clear and decided. Many witnesses feel themselves unable to deal with the matter. A few decline to discriminate between the effects of smoking and those of the other modes of consumption. Well over four hundred witnesses, however, institute a clear comparison. Of these there are over a hundred medical men trained more or less thoroughly according to European methods, of whom four-fifths regard smoking as the most injurious form of consumption. There are over forty practitioners trained after native methods, of whom nearly three-fourths hold the same opinion. There are nearly three hundred non-medical witnesses who are similarly divided. These figures show that the decided majority of such witnesses as have given an opinion regard smoking as the most injurious form of consumption, and this is found to be the case both for all classes of witnesses and for all provinces. The majority is least in Bengal, being precisely two to one in each of the two classes of medical, and rather less than that among the non-medical, witnesses who have recognised any difference. It has also to be borne in mind that among the minority there are some who clearly state that though ganja smoking may be less deleterious than drinking or eating ganja, it is more deleterious than drinking bhang. And there are probably others who hold this view, though they have not thought of stating it.

There are some witnesses whose experience is that drinking bhang is a habit which is more likely to go to excess than smoking, because more seductive and more sociable. But there are many others whose experience is precisely the reverse. There are one or two witnesses who think smoking less harmful than drinking hemp, because the latter form of consumption lends itself in their opinion more readily to deleterious mixtures. But there is a great deal of evidence to a precisely opposite effect. There are also some witnesses who emphasise the injurious effects of the excessive use of bhang on the digestive system. But the preponderance of opinion is that excessive smoking of charas or ganja has still more injurious effects on the system.

Common experience then as indicated in the evidence of all classes of witnesses seems to teach that smoking ganja or charas is more injurious than taking bhang. There seems no reason to decline to accept this view. The following reasons seem to support it: (*a*) there is much less of the resin in what is properly known as bhang than in ganja or charas; (*b*) the products of the destructive distillation of the resin appear to be capable of doing injury, especially if used to excess, and to be carried to the lungs and readily absorbed by the inhalation which is the invariable method of smoking. At the same time no one can read the evidence or observe the facts without realising that the use of bhang, at all events if carried beyond moderation, may also be distinctly injurious.

Admixtures.

456. In considering the effects of hemp drugs, it is necessary not to forget the admixtures used more or less frequently with them. These are discussed more fully in other parts of the report. There are certain of them, such as the spices used to render bhang a more palatable drink and also perhaps less irritating to the digestive system, or the almonds used to emulsify the resinous matter in the bhang, or the tobacco used as the most pleasant vehicle and diluent of charas or ganja when smoked, which need not be discussed here. Their effects are unimportant.

But there are certain admixtures which are taken with the hemp drugs, at least ostensibly, with the express purpose of intensifying their effects. Thus opium is sometimes smoked with ganja. This is probably sheer vice, a dissipated desire to mix intoxicants. Cantharides and nux vomica are sometimes used in bhang. The object of this is apparently to produce aphrodisiac effects. But nux vomica is also perhaps used thus as a tonic. This drug is apparently sometimes smoked, when its effect would be nullified. Arsenic is similarly used in bhang, probably from a belief in its prophylactic and tonic properties. It is also stated to be smoked with charas or ganja. In this form it would be very poisonous, but the evidence seems to show that it is smoked ostentatiously by jogis and fakirs; and probably it is not really inhaled. It is also sometimes stated that aconite is occasionally smoked. All these admixtures, as well as others of a more exceptional and extraordinary character, appear to be rarely used. More common than any of them is dhatura. It is generally the seeds, but occasionally the leaves, that are used. This drug is used by those debauchees or other excessive consumers who either cannot afford sufficient ganja or bhang, or who desire a stronger form of intoxication than either can supply. There is also some little evidence of the occasional use by those who supply the drink of an infusion of dhatura to strengthen bhang, perhaps sometimes without the knowledge of the consumers. There is a good deal of evidence both generally of the use of this drug by excessive consumers, and also in particular cases of the gradual formation of the dhatura habit when ganja or bhang has failed to satisfy. Dhatura is clearly more strongly intoxicant than the hemp drugs, and there can be little doubt that the evidence which represents it as decidedly more injurious may be accepted as in accordance with fact. There is a strong popular prejudice against this drug, and it is not used by moderate smokers at all. It does not seem likely that it would ever replace hemp drugs any more than it now supplements them among moderate consumers, but only among persons who deliberately desire intoxication and are indifferent in their choice of intoxicant. At the same time the use of *Hyoscyamus muticus* (or "Hill bhang of the Western frontier"), already referred to, does indicate the possibility of more general resort to dhatura if ganja were not available. The active principle of this drug is closely allied to that of dhatura in its physiological effects. There are also many witnesses who believe that consumers of the hemp drugs (especially, but not exclusively, excessive consumers) would take to dhatura if they could not obtain the drugs to which they are accustomed, and this opinion is entitled to considerable weight.

Dhatura.

457. Dhatura belongs to the same natural order as hyoscyamus and belladonna. The active principle of dhatura is hyoscyamine with small quantities of atropine and hyoscine: the active principle of belladonna is atropine with some hyoscyamine. These three alkaloids are all closely allied in their physiological action. The action of atropine has been fully studied. It is unnecessary, therefore, to say more of the physiological action of dhatura. The leaves, and in even higher degree the seeds, form a very powerful intoxicant; and the delirium which ensues from the use of the drug is well known. The effects of dhatura as introduced into the system through the stomach have hitherto chiefly received attention, but the effects of smoking have also been observed. There have, however, been hitherto no physiological experiments to ascertain the effects produced by the prolonged inhalation of

dhatura smoke. The Commission requested Dr. D. D. Cunningham to conduct such experiments. His report is contained in Vol. III Appendices. The following extract is of interest: "The subject of experiment, as in the case of that on the effects of the inhalation of the smoke of ganja, was a fair-sized specimen of *Macacus rhesus*. The treatment was initiated on the 1st June and continued until 11th July, so that the experiment lasted for a period of about six weeks. In its conduct the same inhalation apparatus was employed as in the first experiment. At the outset the seeds of dhatura were made use of as the source of smoke; but as they appeared to be undesirably potent, leaves were presently substituted for them, and were persistently employed throughout the rest of the experiment.

"The symptoms attending the treatment were not invariably quite uniform in character. On some occasions indications of a certain amount of cerebral excitement were present for some time; but, as a rule, drowsiness and gradually increasing intoxication manifested themselves from the outset, either alone or associated with symptoms of irritation of the respiratory apparatus as indicated by coughing.

"The animal was killed by means of prolonged administration of chloroform on the morning of the 14th July, and a *post-mortem* examination conducted at once with the following results:—

"The lungs were not adherent to thoracic walls, but were both deeply congested almost everywhere, and especially towards their apices, in which numerous tubercular nodules and small cavities were present. Such phenomena were, of course, very frequent in the lungs of monkeys in confinement, but it remains possible that the general pulmonary congestion may have been partially due to irritation incident on the inhalation of the smoke. The visceral pericardium was almost devoid of fat, and was somewhat thickened and opaque, especially over the region of the right auricle. The omentum and mesentery were also very free from fat. The spleen appeared to be rather anæmic, and was somewhat fibroid in texture. The liver, pancreas, stomach, large and small intestines, and kidneys presented no abnormal appearances.

"On opening the cranium the dura-mater was found to be somewhat thickened, and especially in the neighbourhood of the superior longitudinal sinus very conspicuously congested. In this region, too, the membrane in the occipital region was fixed to the cranial walls by soft, very vascular adhesions. The pia-mater was thickened and so highly injected throughout that the cerebral surface had a generally diffused pink tint. The cerebral substance was everywhere abnormally soft and so friable as to render any immediate removal of the membranes impossible without the occurrence of much destruction of the nervous tissue. Like the surface, although in minor degree, it was of a pinkish tinge owing to abnormal accumulation of blood. Conditions of this kind appeared to be universally diffused throughout the whole of the cerebral centres, the texture of the hemispheres, of the cerebellum, and of the basal ganglia being alike soft, and the evidences of abnormal congestion universally distributed. In spite of this, however, the spinal cord and its membranes were to all appearance perfectly healthy.

"In so far as a single experiment goes, the results in this case would then seem to show that the habitual inhalation of the smoke of dhatura, even when

only practised for a relatively brief period, is sufficient to establish serious morbid changes in the cerebral nervous centres, and that it therein differs from the habitual inhalation of the smoke of ganja extending over a much more prolonged period. This clearly indicates the necessity of distinguishing between cases in which ganja alone is employed from those in which a mixture of ganjà and dhatura is substituted for it, as otherwise certain prejudicial effects which are really due to the use of the latter drug may be erroneously credited to the former one."

Medicinal use.

458. Turning now to the effects of hemp drugs, it seems expedient to take up first their medicinal use. This is not confined to their use as prescribed by physicians, but extends also to their use as popular or domestic remedial agents. Out of a total of 1,193 European and Native witnesses before the Commission, little less than two-thirds refer to the use of hemp drugs by the Vedanti and Yunani schools of native physicians and native doctors generally, while the rest afford no information on the subject or reply in the negative. About one-sixth of the former refer specially to the use of ganja, one-third to bhang, and the remainder state that both forms of the drug are prescribed, several of the witnesses in the North-Western Provinces and Punjab particularising charas as a remedial agent. If the number of witnesses who speak of this use in each province may be taken as approximately indicating its extent, then it would appear that the medicinal use is well known throughout India.

Ancient literature.

459. Before alluding to the use of hemp drugs by native physicians in the present day, the Commission consider that it will perhaps be of interest to give a brief *résumé* of the medicinal properties assigned to hemp by some of the ancient writers. Mr. George A. Grierson, I.C.S., informed the Commission that having searched through all the Sanskrit and Hindi books accessible, he found the first mention of *bhanga* as a medicine in the work of Suçruta, written before the eighth century A.D. *Bhanga* is recommended with a number of other drugs as an antiphlegmatic. In the same work Mr. Grierson points out that *vijaya* is mentioned as a remedy for catarrh accompanied by diarrhœa, and as an ingredient in a prescription for fever arising from an excess of bile and phlegm. In these two passages, however, *vijaya* is probably an equivalent of *haritaki*, the yellow myrobolan, and does not mean hemp; and Dr. Hœrnle informed Mr. Grierson that in the oldest medical works the word *vijaya* is explained by commentators as referring to the yellow myrobolan. The use of bhang between the fifth and twelfth century is frequently mentioned in dictionaries, and the names used would seem to show that its use as an intoxicant was then known. In the Rajanighantu of Narahari Pandita, A.D. 1300, the effects of hemp on man are described as excitant, heating, astringent: it destroys phlegm, expels flatulence, induces costiveness, sharpens the memory, and excites appetite. In the Carngadharasamhita, a medical work, the date of which is unknown, but which must have been compiled during the Muhammadan period of Indian history, bhang is specially mentioned as an excitant. In the Dhurtasamagama, or "Rogues' Congress," A.D. 1500, the following passage occurs: "Ganja, which is soporific and corrects derangements of the humours, which produces a healthy appetite, sharpens the wits, and acts as an aphrodisiac." In the Bhavaprakaça, written about A.D. 1600, bhang is described as being "antiphlegmatic, pungent, astringent, digestive, easy of digestion, and bile-affecting, and increases infatua-

tion, intoxication, the power of the voice, and the digestive faculty." In the Rajarallabha, a materia medica of rather later date, ganja is described as "Indra's food," is acid, produces infatuation, and destroys leprosy. It "creates energy, the mental powers, and internal heat, corrects irregularities of the phlegmatic humour, and is an elixir vitæ."

In the Makhzan-el-Adwiya, hemp seeds are said to be "a compound of opposite qualities, cold and dry in the third degree, *i.e.*, stimulant and sedative, imparting at first a gentle reviving heat, and then a considerable refrigerant effect." The qualities of the plant are stimulant and sedative. "The leaves make a good snuff for deterging the brain; the juice of the leaves applied to the head as a wash removes dandruff and vermin; drops of the juice thrown into the ear allay pain and destroy worms and insects. It checks diarrhœa, is useful in gonorrhœa, restrains the seminal secretions, and is diuretic. The bark has a similar effect. The powder is recommended as an external application to fresh wounds and sores, and for causing granulations; a poultice of the boiled roots and leaves for discussing inflammations and cure of erysipelas, and for allaying neuralgic pains. The dried leaves, bruised and spread on a castor-oil leaf, cure hydrocele and swelled testes." Rumphius in the Herbarium Amboinense, A.D. 1695, states that the Muhammadans in his neighbourhood frequently sought for the male plant from his garden to give to persons afflicted with virulent gonorrhœa or with asthma, and the affection which is popularly called "stitches in the side." He also adds that the powdered leaves check diarrhœa, are stomachic, cure the malady named *pitao*, and moderate excessive secretion of bile. He mentions the use of hemp smoke as an enema in strangulated hernia, and of the leaves as an antidote in poisoning by orpiment.

Modern native practice.

460. The use of hemp drugs by native physicians, as evidenced from replies of witnesses received by the Commission, may be considered under two main heads—(*a*) as specifics in the treatment of diseases, and (*b*) in their general therapeutic applications; while a few uses of the drugs which do not fall within these divisions are also occasionally mentioned. It is hardly necessary to premise that the use of hemp drugs by hakims, etc., is wholly empirical, the drugs being used apparently haphazard for the most diverse diseases. It is interesting, however, to note that while the drugs appear now to be frequently used for precisely the same purposes and in the same manner as was recommended centuries ago, many uses of these drugs by native doctors are in accord with their application in modern European therapeutics. *Cannabis indica* must be looked upon as one of the most important drugs of Indian Materia Medica.

In connection with the pharmacy of the drug, the preparations of the hemp plant used by native doctors are bhang, ganja, and sometimes charas: the seeds appear to be very rarely used. Bhang is generally prescribed as a cold infusion prepared from the powdered and well-triturated leaves, or as a confection or "moduks," especially in the treatment of nervous debility: into all these preparations a large number of other ingredients usually enter. The admixture of saccharine matter with bhang is popularly supposed to render it more potent as an intoxicant. Bhang is also used as a local application in the form of poultice, and sometimes the finely-powdered leaves are used as a snuff. When ganja and charas are prescribed for inhalation, the drugs are smoked mixed with tobacco;

when ganja is used for local fumigation, the smoke from the unmixed drug is employed. These two drugs appear to be rarely used for internal administration. Occasionally an oil prepared with ganja and other ingredients is used as a rubefacient. The expressed oil from the seeds is also used for a similar purpose.

Treatment of disease.

461. In discussing the diseases treated, we may take first diseases of the nervous system. Witnesses refer to the use of the drugs in the treatment of "brain fever," cramps, convulsions of children, headache, hysteria, neuralgia, sciatica, and tetanus. In certain of these diseases, *e.g.*, convulsions of children, neuralgia, and tetanus, the use of hemp preparations has also been advocated by European practitioners. The late Sir W. B. O'Shaughnessy, of Calcutta, appears to have been the first to use hemp resin in tetanus. He found that in many cases it effectually arrested the progress of the disease, but in the hands of others equally good results were not always obtained. O'Shaughnessy explains this by the fact that the use of hemp is so universal among the lower classes, that it is only in those patients who are not habituated to it that beneficial effects are likely to ensue when the drug is administered medicinally. The treatment of tetanus by the inhalation of ganja smoke has also been recommended. In the class of specific infectious diseases, hemp drugs are stated to be used in hydrophobia, ague, remittent fever, cholera, "to relieve burning symptoms in phthisis," dysentery, erysipelas, and gonorrhœa. O'Shaughnessy more than 50 years ago used hemp resin with more or less success in hydrophobia and cholera. In the treatment of dysentery the resin has been found of much value by many European doctors, and excellent results have been obtained with it. In addition to the medicinal use of the drug for the treatment of cholera during epidemics, hemp drugs appear occasionally to be used as prophylactics, and for a similar purpose the use of the drugs is recommended in malarial areas to counteract the effects of "bad air and water." In both cases hemp drugs probably act as indirect prophylactics, stimulating the nervous system and allaying depression, thus serving much the same purpose as the popular use of alcoholic beverages by the lower classes in European countries during the prevalence of epidemics. But, on the other hand, it must be remembered that when ganja is smoked as a prophylactic, it is always mixed with tobacco, and yields members of the aromatic series of hydrocarbons, the lower members of which are known to possess both *antiseptic* and *antipyretic* powers. In the treatment of diseases of the respiratory organs, hemp drugs are stated to be used in hay-fever, asthma, bronchitis, and coughs, inhalation of ganja smoke being the usual mode of exhibiting the drug. Pounded bhang leaves are stated to be sometimes used as a snuff in catarrh and "diseases of the nose and head." In several diseases of the organs of digestion hemp drugs are prescribed, flatulence, diarrhœa, dyspepsia, piles, and prolapsus ani being the chief. Bhang has also been prescribed to check salivation. In diseases of the urinary organs hemp preparations are used in diabetes, impotency, stricture, spermatorrhœa, hydrocele, incontinence of urine, and swellings of the testicles. In orchitis a warm bhang poultice applied on a warm fig leaf is recommended to be bandaged over the testicles, and in hydrocele a similar poultice is spread on a castor-oil leaf. In impotency and nervous debility the drug is doubtless used on account of its supposed aphrodisiac power. Hemp drugs are also stated to be prescribed in diseases of the heart, brain, spleen, in rheumatism, gout, and delirium tremens, and they are also used in the treatment of scabies, guinea-worm, and boils. An oil prepared

from bhang and other ingredients is prescribed in white leprosy, and bhang smoking is stated to be used against the poisons of fish and scorpions.

Therapeutics.

462. In connection with the therapeutics of hemp drugs, one of the commonest uses is for the relief of pain, the drugs being used either as local or general anodynes. Thus bhang poultices are frequently mentioned as soothing local applications to painful parts; and poultices are used for inflamed piles and over the seat of pain in liver and bowel diseases, and to check inflammation and erysipelas. Fumigation with the smoke from burning ganja or bhang is also used as a local sedative in piles. A small fragment of charas is placed in a carious tooth to relieve toothache. And the use of the drugs is also referred to for the relief of protracted labour pains, dysmenorrhœa, pain in the stomach, cramps, and neuralgia. One witness states that hemp drugs are used as a substitute for opium. In cases of circumcision the drugs are used as anæsthetics, and a witness mentions that native doctors on rare occasions substitute ganja for chloroform in operations. The tincture of *Cannabis* has been used as a local anæsthetic in extracting teeth (British Journal of Dental Science).

Pulmonary sedative.
Asthma and bronchitis.

463. In asthma and bronchitis inhalation of ganja smoke appears to be very frequently prescribed; while, on the other hand, there is evidence which tends to indicate that both affections may be induced by charas or ganja smoking indulged in as a habit. The inhalation of ganja smoke may very possibly first act as a pulmonary sedative, diminishing the secretion of mucus, and after long continuance as an irritant increasing mucus secretion, and giving rise to a chronic bronchitis. In considering the therapeutic action of ganja and charas smoke in these affections, it must be remembered that the drugs are as a rule smoked admixed with tobacco from a *chillum*, and the smoke inhaled into the lungs in a similar manner as sometimes in cigarette smoking. In ganja smoking, however, the inspiratory act is far greater and more prolonged, a larger volume of smoke entering the lungs than in cigarette smoking. In smoking ordinary tobacco the composition of the smoke will vary according to the amount of air admitted during combustion, oxidation being thus more perfect in cigar than in pipe smoking. In smoking tobacco from a pipe, pyridine is one of the chief aromatic bases produced. In smoking a mixture of ganja or charas and tobacco, aromatic hydrocarbons must also be formed: pyridine and others from the tobacco, and aromatic hydrocarbons also from the hemp drug, though at present we are not in a position to indicate the precise nature of the hydrocarbons afforded by its dry distillation. The base pyridine which is found in pipe smoke possesses the power, according to Germain Sée (Comptes Rend. Ac. Science, 1886), of diminishing the reflex activity of the respiratory centre, and may thus act as a pulmonary sedative; and, according to Lauder Brunton, the inhalation of the vapour of pyridine has been used in asthma with beneficial effect. Tobacco smoking has also been recommended in the treatment of asthma. Irrespective, therefore, of the products afforded by the hemp drugs, the tobacco smoke may be thus of value in both bronchitis and asthma. But long-continued smoking, whether of ganja or of any other substance, doubtless results in the deposition of finely divided carbonaceous matter in the lung tissues, and the presence of other irritating substances in the smoke ultimately causes local irritation of the

bronchial mucous membrane, leading to increased secretion, and resulting in the condition which is described as chronic bronchitis in ganja smokers. Whether true asthma can be induced by hemp drug smoking, the Commission consider open to much doubt. It appears to them highly probable that the drugs are smoked in the first instance for the relief of that disease. On the other hand, it is well known that frequent asthmatic seizures result in emphysema of the lungs and attendant bronchitis; and possibly most cases of hemp drug bronchitis are associated with emphysema, induced partly by the strain mechanically thrown on the lungs in smoking, and partly as a result of the chronic bronchitis. So that in considering the œtiology of associated asthma and bronchitis in ganja smokers, they are inclined to the view that in the vast majority of cases the drug is not the cause. In many of the statements of witnesses regarding alleged experience there is no satisfactory evidence of even the co-existence of these diseases with the habit of using hemp drugs. And when that co-existence is reasonably established, there is often no good ground for accepting the relation of cause and effect. The drugs may have been used in many cases owing to the popular notion that they alleviate these diseases. At the same time there is some evidence that the drugs may cause bronchitis or bronchial catarrh as above described. There is no satisfactory evidence that they ever cause asthma.

Diuretic action.

464. The diuretic action of bhang is mentioned in connection with the treatment of gonorrhœa. The diuresis which is popularly supposed to be induced by administration of an infusion of bhang is in accord with Dr. Russell's experiments (Bengal witness No. 105) which are appended to his paper. In these experiments Dr. Russell found that the leaves both from mature and immature plants, whether fresh or dry, and used as a drink or smoked with tobacco, produced diuresis; but Dr. Russell does not appear to have noticed diuresis following the smoking of ganja. These experiments were made in 1883. Subsequently some supplementary experiments were conducted by Dr. Russell, which are embodied in Dr. Prain's Report on the "Cultivation and use of ganja." In the précis of his experiments, Dr. Russell states: "The only marked effect was diuresis from drinking infusions of fresh (not dried) leaves and stems." In his oral examination before the Commission, Dr. Russell repeated that the dried leaves had no marked diuretic effect. The diuresis was the most marked effect of the fresh leaves. The difference in the action of the fresh and dry leaves is no doubt due, as suggested by Dr. Russell, to the escape of a volatile principle, this volatile principle being, no doubt, a volatile oil. Many volatile oils are well known to possess diuretic properties. It is to the presence of the volatile oil of juniper that that well-known domestic diuretic gin owes its properties. The higher the temperature at which the leaves are dried, the smaller would be the amount of retained essential oil; but the practical point is the desirableness of using only fresh leaves when the diuretic effect of the drug is required. The flowering tops are known to contain a volatile oil, and the diuresis which follows the exhibition of the extract which is prepared from ganja has been specially noted by Prof. C. H. Wood. The volatile oil present in the flowers is probably a mixture of low and high boiling point oils; in preparing the extract the low boiling point oil escapes, the peculiar odour of the finished extract being due to the retention more or less of the high boiling point fraction. Some witnesses refer to the febrifuge properties of hemp drugs; and it is stated that bhang used as a drink cuts

short the cold stage in fever. There appears to be but little doubt that when bhang is used by natives in fever, the benefit accrues on account of its diuretic action, and not because it possesses any real febrifuge properties. It is not known to possess the latter.

Tonic and other effects.

465. The tonic, digestive, stimulant, antispasmodic, astringent, and alterative effects of the drugs are mentioned by some witnesses. It is probably on account of the supposed hæmostatic effect that powdered charas is used as an application to cuts to check bleeding and induce healing, and possibly the use of the drugs in menorrhagia is based on similar reasoning. In this connection, however, it is interesting to note that Dr. R. L. Dey, a medical officer of the Eastern Bengal State Railway, in 1866 reported the successful treatment of a number of cases of obstinate menorrhagia with tincture of Indian hemp and liquid extract of ergot, although he could obtain no benefit from the use of ergot administered with sulphuric and gallic acids and other hæmostatics. The use of the drug as an ecbolic is also mentioned. According to Stillé and Maisch (National Dispensatory), there is evidence to show that *Cannabis* appears capable, directly or indirectly, of causing uterine contraction, as in many cases of uterine hæmorrhage, and it is also said to cause contraction in the pregnant uterus with as much energy as ergot, but with less persistent action. Some witnesses refer to the purgative action; it is quite possible that a *chillum* of ganja may act in the same way as the morning pipe does with many Europeans.

Aphrodisiac action.

466. The use of the drug in cases of impotency is, no doubt, based on its supposed aphrodisiac effects. The experiments of Prof. Wood indicate that the drug does not possess any aphrodisiac power; and Lauder Brunton remarks ("Text-book of Pharmacy, Therapeutics, and Pharmacology"): "*Cannabis indica* has been regarded as an aphrodisiac, but the trials of it made in this country seem to show that it does not, itself at least, have any such action, and merely induces a condition of partial delirium in which Easterns may possibly have visions of a sexual nature, and indeed they try to give a sexual direction to the mental disturbance which the *Cannabis* produces by mixing with it musk, ambergris, or cantharides." O'Shaughnessy, on the other hand, speaks of the drug acting on the "generative apparatus," and in experiments, which he tried on some of his pupils, he states that, "with scarcely any exception, great aphrodisia was experienced" from administration of the extract. Physiologically the active principle of hemp drugs has, so far as is known, no aphrodisiac power whatever; and, as a matter of fact, they are used by ascetics in this country with the ostensible object of destroying sexual appetite. But taken as a stimulant to assist in the execution of a specific purpose, its indirect effect is perfectly intelligible. Like alcohol it gives strength and free course to the predominant desires of the animal nature. This effect will be considered more fully later. Meanwhile it is enough to say that the alleged aphrodisiac action seems to be merely the indirect effect of the drug as a stimulant. This effect explains the use of these drugs in the houses of prostitutes, regarding which there is a good deal of evidence, just as alcohol in one form or another is used in similar houses in Europe.

The following are some of the minor cases to which ganja is applied. Occasionally the drug is burnt as a disinfectant and used in lieu of carbolic acid. It is also applied to sores for healing, and ganja ash is used to stop ulceration. By

singers the drugs are used to clear the throat; and they are also alleged to possess vermicide properties.

Cattle disease.

467. Regarding the use of hemp drugs in the treatment of cattle-disease, out of a total of 1,193 witnesses, one-half give no information; and of the rest rather over one-half speak to the use of bhang alone, while the remainder speak generally of the use of both ganja and bhang. A few witnesses speak only of the use of ganja, but that is mainly where bhang is not available. This use of the drugs is in evidence in all provinces, though naturally to a less extent in Bombay and Madras than elsewhere, and least of all in Burma. Among the diseases for which hemp drugs are prescribed in native veterinary practice for cattle, horses, sheep, and occasionally elephants may be mentioned colic, bowel-complaints, diarrhœa, sprains, constipation, cow-pox, foot-and-mouth diseases, hoof disease, pneumonia, affections of the throat, colds and coughs, quinsy, and rinderpest. Ganja is used to extract worms in foot-sore diseases of cattle and to remove intestinal worms, and is also burnt to disinfect sheepfolds. A very common use of the drugs is as a tonic to produce condition, to make oxen fleet of foot, to relieve fatigue, and to give staying power. Bhang is sometimes used to increase the flow of milk in cows, and also to stupefy them when they refuse to be milked. The drug is occasionally given to mares shortly before being covered, and it is also used after delivery. Bhang mixed with salt is given to cattle as preventive against purging, to which they are generally subject from feeding on the young shoots of grass sprouting during the early part of the monsoon. Hemp drugs when used for cattle disease are usually administered raw, but always admixed with other ingredients, spices, salt, or gur. Occasionally bhang is first cooked in a metal pot, then mixed with gur, when animals eat it readily, or it is forced down the throat mixed with salt.

The use of hemp drugs for the treatment of cattle-diseases appears to be nearly equally prevalent throughout Northern India. Mr. Driberg, Excise Commissioner, Assam, in his oral evidence before the Commission said: "I have no feeling that the Circular No. 28 of 1882 was necessary. I think it was issued on insufficient information. I never push it forward. I have never seen the stuff used for cattle; nor have I heard of its being used, except when the use is thus pleaded in excuse." The Commission, while recognizing the necessity of the popular use of the hemp drugs in veterinary practice, do not find in the evidence any reason for thinking that the practice is more common in Assam than elsewhere in the north of India.

The Commission have said all that it is necessary to say regarding the strictly medicinal use of hemp drugs in the alleviation of human suffering and disease. This is to be carefully distinguished from the popular use of the drugs by the ordinary consumer, which it is now proposed to discuss. It is true that there are points where the two uses can hardly be separated by a hard-and-fast line. The medicinal use seems to merge sometimes into the popular use, where the drugs are used, ostensibly at least, for purposes akin to medical. The popular impression of the drugs also must be influenced by their uses in medicine.

Is moderate use beneficial?

468. It is natural that the people generally should associate certain beneficial results with the use of hemp drugs, and that this recognition should tend to encourage, and should be urged in justification of, their moderate use. At the same time it is necessary to

consider the popular use and its effects apart from the medicinal use. A drug may be a useful medicine, but a bad thing to allow into the market freely for general consumption. The evidence regarding the popular use has now to be considered. There are only about fifty witnesses who assert that no benefit whatever can be derived by consumers from the moderate use of any form of these drugs. The vast majority assert that in some one or other of their forms they may produce at least temporarily beneficial effects. Many even of those who regard the use of the drugs as on the whole baneful admit such temporary benefits. It is to be noted, however, that, with the very rarest exceptions, the evidence points to the use of the drugs by males only. Women would therefore appear either not to require or to be denied the benefits ascribed to the drugs.

Food accessory or digestive.

469. Among the beneficial effects attributed to the drugs is their effect as a food accessory or digestive. This effect is more generally attributed to bhang than to the other two forms. But there are a large number of witnesses who attribute it also to the smoking of ganja. The "cooling and refreshing" cup of bhang taken by the well-to-do, especially in the hot weather, to stimulate their energies and to create an appetite for food is frequently in evidence. There would seem to be a very general use of bhang in moderation as a stimulant and digestive by the middle classes, especially in advancing years. Some of the most intelligent and enterprising classes of the community are among those who thus use bhang. This use is generally spoken of without any marked condemnation, and often even with approval; for it is the practice of the respectable classes. But after all there seems quite equally good ground for believing that the *chillum* of ganja taken by the labouring man after his food with the object of allaying weariness and assisting digestion is no more harmful; and there are many witnesses whose evidence is in this sense. The use of bhang in the one case is sometimes compared to the glass of wine taken at meals by a moderate consumer of alcohol, and the use of ganja in the other case to the labouring man's glass of beer or even to his pipe of tobacco. It is possible also that the effects of hemp drugs in this respect may be to a certain extent comparable with those of tea. In connection with the most recent experiments on the subject, the action of tea is thus described by Dr. Edward Smith: "It increases the assimilation of food both of the flesh and heat forming kind, and with abundance of food must promote nutrition, whilst in the absence of sufficient food it increases the waste of the body." If there is anything in this comparison, Dr. Smith's remarks regarding tea may throw some light on the statements frequently found in the evidence regarding the necessity for sufficient or nourishing food to prevent injury to the constitution from the prolonged use of hemp drugs.

To give staying-power.

470. The use of these drugs to give staying-power under severe exertion or exposure or to alleviate fatigue is very largely in evidence. Here it is ganja especially which is credited with these beneficial effects. For ganja is far more extensively used than bhang by the labouring classes. The latter is mainly used by persons like the Chaubes of Mathra, who are very frequently referred to, and professional wrestlers. Gymnasts, wrestlers and musicians, palki-bearers and porters, divers and postal runners, are examples of the classes who use the hemp drugs on occasions of especially severe exertion. Fishermen and boatmen, *singhara* cultivators

working in tanks, dhobis and night watchmen, mendicants and pilgrims, are named as among those who use them under severe exposure. All classes of labourers, especially such as blacksmiths, miners, and coolies, are said more or less generally to use the drugs as a rule in moderation to alleviate fatigue. In this connection a reference to Dr. Cunningham's experiment described in Vol. III Appendices is interesting.

Febrifuge.

471. There is also a large body of evidence showing that hemp drugs, both as smoked and as drunk, are used as a febrifuge or preventive of the diseases common in malarious tracts or arising from the use of bad water. This is the justification alleged for the habitual use of these drugs in certain localities. Here, of course, the experience of the witnesses is more limited; but the evidence is very considerable. Labourers in malarious tracts and cultivators of wet and marshy lands, jungle tribes, and those who have to work or reside in jungle tracts, are among those who are said to use the drugs for these purposes. It is impossible also to shut the eyes to the evidence which often comes up unexpectedly, showing that respectable and intelligent people going on duty to such tracts, and sepoys sent on foreign service or garrisoning comparatively unhealthy districts, often take to these drugs for these purposes.

Other beneficial effects.

472. There are a few other effects of a beneficial character which are referred to by certain witnesses. They are, however, of a less important character and less generally contemplated than those which have been already considered. Thus the drugs are said to be used sometimes to prevent insomnia and to relieve anxiety, as the consumer of alcohol sometimes takes a "night cap before going to bed" or a glass of wine when he is of heavy heart. The drugs are said to be cheering in their effects, and to be prized by many on this account. An interesting illustration of this may perhaps be found in the popular belief existing in many parts that these drugs protect against cholera and other epidemic diseases. One very intelligent witness, who has seen much of this use, explains it as due to the stimulating and inspiriting nature of the drugs. The drugs are said to be used to produce concentration of attention not only by fakirs, but also by such tradesmen as jewellers doing very fine work. They are said to be used by the poor and on occasion by others to alleviate hunger when sufficient food is not obtainable. The alleged occasional use in this way by sepoys, who for any reason cannot devote a sufficient amount of their pay to procuring food, is interesting. One witness (Mr. E. J. Ebden, Collector of Ahmednagar) thus refers to this: "I am told on good authority that native soldiers who have gambled away their pay employ the ganja pipe as a cheap substitute for food until in funds again." Want of money from other causes might lead to the same practice; and the evidence shows that the practice is not confined to sepoys. It is especially found among wandering mendicants, and no doubt exists among other classes. The practice cannot result in permanent advantage, but the temporary relief is not to be overlooked.

Contrary evidence.

473. There are a few witnesses who stigmatize all such allegations of beneficial results as mere excuses made for a vicious indulgence. As some opium consumers attribute all manner of good effects to opium, liquor drinkers to alcohol, and tobacco smokers to tobacco, so do consumers of hemp attribute these beneficial effects to their

favourite drug. It is, no doubt, true that there is a tendency to find excuse for an unnecessary indulgence. But the medicinal uses of these drugs lend at least some measure of support to the popular belief among consumers that some beneficial effects do follow from the moderate use. There are one or two witnesses who assert that the use of these drugs, far from being a protection against malaria, makes the consumer more liable to its influence. This may be true of the excessive use, which may injure the constitution and predispose to noxious influences. There is, however, no sufficient ground for believing that it is true of the moderate use. Other witnesses assert that the effect in alleviating fatigue is merely temporary, and results in the end in greater exhaustion. So far as the moderate use is concerned, this view would appear to be mainly theoretical; for, as has been already pointed out, there are very few witnesses who even profess to have any experience of evil effects resulting from moderate consumption. There are also a number of witnesses who attribute these good effects to bhang only, while some limit them to the occasional use of the drugs. These statements may perhaps be taken for practical purposes together. The occasional use of ganja or charas must be rare compared with the occasional use of bhang; for the smoking habit is more difficult to acquire, and there are therefore few who can with comfort indulge in it only occasionally.

The truth seems to be that while, no doubt, these drugs are more commonly consumed merely as stimulants than from any clearly defined idea of their beneficial results, yet they are popularly believed to have (if moderately used) some such beneficial results as have been above described. Moderate consumers believe this, and would feel a sense of deprivation if they were unable to obtain what they regard as a beneficial stimulant. This deprivation would be more felt among the poorer classes than among the wealthier, whose tastes lead them to more expensive luxuries. It is the poorer people and the labouring classes who as a rule use these drugs for the purposes indicated. They are admittedly as a rule moderate consumers. They do not seem to exceed in the use of hemp so frequently as in the use of liquor. Those who seem, according to the statements of many witnesses, really to derive no benefit but only harm from the use of these drugs are those who, leading sedentary or idle lives, take the drugs from a merely vicious desire of nervous excitement, and have a strong tendency to excess.

Is moderate use harmless?

474. The fact that certain beneficial effects result from the moderate use under certain circumstances is not, however, necessarily inconsistent with the view that even the moderate use is on the whole injurious. Witnesses were therefore invited to consider separately the question if the moderate use of these drugs is on the whole harmless. About eight hundred and fifty witnesses (*i.e.*, considerably more than two-thirds of the whole) record their opinion. Of these, over sixty declare that the moderate use cannot be regarded as harmless simply on the ground that it is apt to develop into excess. The remainder (about eight hundred) answer the question clearly in the affirmative or negative for each of the forms of the drugs with which they are acquainted. Nearly three hundred witnesses deal with charas, and their opinion is as four to three against that drug. It is in the Punjab, Sind, and the North-Western Provinces that opinion is strongest in this direction. It is in these provinces that charas is best known, and elsewhere

Charas.

the drug is probably weaker from deterioration. So that opinion in these provinces is probably entitled to more weight than elsewhere. On the whole, then, there is apparently a more unfavourable opinion of charas than of the other forms of hemp drugs.

Ganja.

475. In regard to ganja, opinion is about seven to five in favour of the moderate use being harmless. In every province, except the North-Western Provinces and Sind, the majority take this view. In Sind the drug is known to but few witnesses, and a large proportion of these few fail to discriminate between the moderate and excessive use. In the North-Western Provinces the drug is well known, and the witnesses are divided as three to two against the drug—almost, indeed, in the same ratio as in regard to charas. Here, however, a careful examination of the papers shows that at least one-fifth of these witnesses against ganja have not discriminated between the moderate and excessive use. In other provinces the majority believe the moderate use of ganja to be harmless. In Bengal, where the drug is best known and most carefully cultivated, this majority is about two to one.

Bhang.

476. Bhang is regarded with more general favour than other preparations of hemp. The witnesses who declare it harmless are nearly as three to one as compared with those who think otherwise. This majority is found in pretty nearly this ratio in all provinces. This may, therefore, be accepted as the prevailing opinion.

Silent witnesses.

477. There is a large number of witnesses who either do not know enough, or do not feel strongly enough, regarding the effects to say anything about them. There is also a large proportion of the other witnesses who declare the moderate use of the drugs to be harmless. Finally, there is manifestly a tendency in many of the witnesses against the drug to base their unfavourable opinion on their experience of excessive consumption. In view of all this, there can be little doubt that there is a very large amount of moderate consumption of all these drugs, the evil effects of which are inappreciable, even if this moderate consumption is not quite harmless. There is a good deal of justification of the failure of many witnesses to discriminate between moderate and excessive consumption. That which is moderate and harmless to one man may be too much for another. And the moderate habit may undoubtedly develop into excess in some cases where excess might not have been looked for. It is so with all intoxicants; but moderation and excess ought to be distinguished. And on the whole the weight of evidence is to the effect that moderation in the use of hemp drugs is not injurious.

Formation of the habit.

478. The great majority of the witnesses are of opinion that the habit of consuming these drugs is easily formed. As a rule these witnesses speak from experience of consumption among the upper and middle classes. There is no doubt that there are some difficulties in the way of a lad learning the habit apart from the deterrent opinion (where it exists) of parents or of society. It is necessary to know how to prepare the drug, though most of the methods of preparation when learned are simple enough. This fact, together with the force of example, explains the very general statement that the habit is acquired in the com-

pany of smokers. The first effects produced in the novice by the drug, especially if smoked, are also far from pleasant, and must tend to make the habit somewhat difficult to acquire. The first effects of bhang need not be unpleasant if the consumer is careful to begin with very small doses. But it is otherwise with hemp smoking. To produce any effect, the smoke has to be taken into the lungs by strong inhalation. The effect of this is often unpleasant and distressing, especially to those who are not accustomed to smoke tobacco in this particular way. It is doubtful, however, whether these first effects are ever more deterrent in character than those which European lads experience on their first acquaintance with tobacco, and it cannot be said that they present any real difficulty in the way of those who from any motive desire to consume these drugs. Once these initial difficulties are past, the habit is easily formed. As in the case of every other intoxicant, consumption tends to become habitual.

Strength of habit.

479. The pretty general belief is that the habit is not easily broken off when once formed; but the difficulty is not believed to be so great as in the case of either alcohol or opium. It is apparently greater than in the case of tobacco. The experience of our jails seems clearly to confirm the general opinion that the opium habit takes a much stronger hold than the ganja habit, and that no injurious physical effects follow the compulsory cessation of the latter. But even the moderate habitual consumer looks for the effect which he associates with the drug, and finds it a considerable effort to give up the habit—an effort which demands considerable strength of mind in cases where the necessity for abandoning the habit may have arisen. In case of habitual excess the difficulty is greatly increased. The weakness of mind at once displayed and intensified by this excess renders it sometimes impossible to give up the habit without restraint. But even in cases of excessive consumption, the difficulty appears to be less with ganja than with alcohol or opium.

Moderation and excess.

480. It is a general belief that there is a tendency for the moderate habit to develop into the excessive. This belief is based on the general view that such a tendency must exist more or less in the case of all intoxicants, on the fact that as the system becomes accustomed to the use of a drug a larger dose appears to be required to produce the same effect, and on the undoubted fact that there are some excessive consumers who had begun and continued for some time the use of these drugs in moderation. It is, however, a matter of ordinary experience that in the case of a moderate consumer of alcohol, for example, who is in normal health, the effect which he wishes to produce by his moderate use is regularly produced by the same dose without any necessity for increasing it. And the fact that there is comparatively so little of excess in the use of hemp drugs, and that so many consumers, especially of bhang among the middle classes and of ganja among working people, retain their moderate habit and regularly have their accustomed dose twice or thrice a day, seems to show that this tendency is certainly not stronger in their case. While individual differences in strength of mind must always lead to difference in results, and hereditary mental instability is in certain cases a factor which must not be overlooked, the fact seems generally to be that excess is found (as in the case of alcohol) to be mainly confined to idle and dissipated persons, and to be often due to the force of example and foolish emulation in bad company. The man who takes these drugs regularly as a food

accessory, or as a stimulant in hard work, does not seem to be prone to excess. Apparently also the tendency is much less towards that occasional excess which in the case of alcohol so frequently becomes habitual. The working man, for example, does not seem to have the same temptation to a debauch with ganja as with alcohol.

Hereditary tendency.

481. Another question of some interest that has arisen in connection with the hemp drug habit, whether moderate or excessive, is the question whether it is hereditary. No evidence of the smallest value is forthcoming to show that it is. There are, no doubt, witnesses who state this as their belief; but the basis of that belief is merely the undoubted fact that in many cases the sons of ganja smokers also themselves smoke ganja. This fact is sufficiently explained in the first instance by the universal tendency of sons to imitate their fathers. It has also to be borne in mind that it is an acknowledged fact that the neurotic diathesis which is hereditary frequently exhibits itself in a tendency to indulge in stimulants. The weakness which may have led the father to indulgence in ganja may be inherited by the son, and produce in him the same tendency to use this drug; but there is no such evidence as would justify the opinion that the indulgence is itself hereditary.

Physiological action of the drugs.

482. In proceeding to deal more directly with the effects induced by the moderate use of the drugs, the Commission consider it desirable to preface the general analysis of information obtained from ordinary witnesses by a *résumé* of the known physiological action of the drugs as determined by competent observers. The earliest experiments of which we possess any record were instituted on animals by Sir William B. O'Shaughnessy. Ten grains of Nepalese charas were given to a middling sized dog; in half an hour the dog was stupid and sleepy, dozing at intervals, starting up, wagging his tail as if extremely contented, and ate food greedily. On being called to, he staggered to and fro, and his face assumed a look of utter and helpless drunkenness. These symptoms lasted two hours and then gradually passed away, and in six hours the dog was perfectly well and lively. In another experiment twenty grains of alcoholic extract of ganja were given to a very small dog. In fifteen minutes he was intoxicated: in half an hour he had great difficulty of movement: in an hour he had lost all power over the hinder extremities, which were rather stiff, but flexible: sensibility did not seem to be impaired, and the circulation was natural. He readily acknowledged calls by an attempt to rise up. In four hours he was quite well. O'Shaughnessy conducted experiments on carnivorous as well as graminivorous animals, and found that the former invariably and speedily exhibited the intoxicating influence of the drug, while the latter experienced but trivial effects from any dose administered. As a result of several experiments on pupils at the Medical College, Calcutta, O'Shaughnessy observes: "The result of several trials was that in as small doses as $\frac{1}{4}$ of a grain the pulse was increased in fulness and frequency; the surface of the body glowed; the appetite became extraordinary; vivid ideas crowded the brain; unusual loquacity occurred; and, with scarcely any exception, great aphrodisia was experienced." Lauder Brunton states: "Its chief effect is on the brain, and is of a twofold nature; it excites a form of delirium and hallucinations, usually followed by deep sleep. Small doses give rise to delirium with hallucinations generally of a gay character causing much merriment, accompanied by a great inclination to mus-

cular movement. The nature of the hallucinations depends greatly on the character of the individual, and people seem to be able to determine their nature as in the case of opium. The dreams produced by Indian hemp in inhabitants of Eastern countries are usually of a sexual character, but when taken by more civilized people of Western nations they are not sexual, and are often of a disagreeable nature. During this stage of hallucination the person may conduct himself rationally, and answer clearly any question put to him. The drug produces in some persons a curious loss of sense of space and time. This stage is generally followed by deep sleep. The sensory nerves are benumbed, and there is frequent tingling and partial anæsthesia. The pupil is dilated. Respiration may be either quickened or slowed. The action on the pulse is very uncertain. Usually it is at first quickened, then slowed, sometimes *vice versâ*. The temperature rises or sinks according as the drug produces muscular movement or sleep. The urine is increased. The processes of digestion are less altered by *Cannabis indica* than by opium, and the after effects of opium (nausea, headache, etc.) are not produced." Dr. Russell (Bengal witness No. 105), in his note furnished to Dr. Prain, gives the following effects of "doses pushed to produce a decided effect": "Mental effects appear in from three to five minutes; exhilaration and excitement of a pleasing nature: the subject talkative and merry; laughs and gesticulates; plays on imaginary musical instruments and sings; converses with imaginary persons; illusions and delusions, usually of a pleasing nature; objective of these very responsive to external impressions and suggestions; rarely quarrelsome or combative. Then ensues a condition of repose and quiet contemplation with fixed stare and immobile pupil. Then drowsiness and restless sleep in from two to three hours, lasting several hours: on waking, dulness, heaviness, profound depression, and irritability lasting for many hours. Physical effects in stage of exhilaration—conjunctiva reddened, pupil immobile; venous turgescence of face and head; respiration increased in frequency by three or four per minute; temperature raised two degrees or more; skin dry; a general condition of febrile excitement, vascular tension, increased pulse, quickened by ten beats or more per minute, hard, jerky, irregular. At later stage of reaction and drowsiness, skin cold, dry, pale; temperature subnormal (97° Fahr.); pulse slow, soft, compressible, very irregular; respirations lessened in frequency and shallow; copious *diuresis*." These experiments refer to the drugs bhang and ganja smoked and drunk as an infusion (*vide* the details of certain of Dr. Russell's experiments instituted in 1883 and appended to his evidence). Dr. Prain in his report on the cultivation and use of ganja refers to some experiments made on cats with alcoholic extracts of ganja, and Dr. Evans, Officiating Chemical Examiner, Bengal, at the suggestion of the Commission, also instituted a series of experiments on cats. Both these observers refer to the idiosyncrasy exhibited as to effects in the animals under experiment. Dr. Evans remarks "that some cats under the influence of the drug were prone to sleep, and others to the development of the phenomena ascribed to the disturbance of the sensory-motor apparatus; that the same dose relative to the body weight would in some animals induce disturbance of the sensory-motor mechanism, and in others a varying degree of narcotism. Apart, however, from individual idiosyncrasy, the quantity of the dose was found to play an important part also in determining the character of the effects produced by the drug. For in certain animals who after certain doses had been recognized as prone to develop sensory-motor disturbance without marked sleep or narcotism, an increased

dose, if sufficiently large, could be relied on to produce sleep deep enough to mask or prevent the development of sensory-motor disturbance, with the exception of the rocking movements." Dr. Bovill (Bengal witness No. 109) describes the effects of smoking ganja in cigarettes, and Assistant Surgeon J. E. Bocarro (Sind witness No. 20) gives notes in which he compares the effects of drinking bhang and smoking ganja and charas.

Dr. Cunningham's experiment on ganja inhalation.

483. The following interesting account of an experiment on the effects of the systematic inhalation of the smoke of ganja conducted by Dr. D. D. Cunningham at the request of the Commission is extracted from his report (Vol. III Appendices). The growth of the habit, the uneasiness arising from privation, the symptoms of the intoxication, especially the appearance of optical delusions, the absence of appreciable indication of cerebral excitement, and the *post-mortem* appearances, are most interesting features of the report. So far as one experiment can be accepted as establishing anything, and subject also to the more careful histological enquiry to be conducted hereafter, this experiment gives additional evidence of the absence of morbid changes in the brain and of tissue changes generally under the action of hemp drugs even when used in excess. At the same time the general features of the experiment as indicated above are on the whole comparable with the effects of the hemp drugs on the human consumer as established in the evidence recorded by the Commission. The remarks of Dr. Cunningham regarding the diminution of appetite accompanied by local accumulations of fat as indicating the diminution in activity of the normal processes of tissue waste under the influence of ganja throw light on the evidence of witnesses who ascribe beneficial effects to this drug in cases of severe exertion without sufficient or suitable food. Dr. Cunningham writes :—

"Nature of the animal employed, *Macacus rhesus*, weighing 16 lbs..

"The first inhalation was administered on the 7th of November 1893 and the last on the 12th of July 1894, so that the experiment extended over more than eight months. During this period one hundred and eighty-one inhalations were administered. During the greater part of the period the administrations were repeated almost daily, save on Sundays, but during March they were repeated only on alternate days, and during April and May only at irregular intervals, owing to the fact that at that time the animal was suffering from a mild but prolonged attack of dysentery. During the earlier part of the course of the experiment the animal apparently disliked the treatment, as he violently resisted introduction into the inhalation chamber, was restless when the smoke began to enter it, and not unfrequently attempted to prevent its entrance by plugging the orifice of the supply-tube. As time went on, however, and the experience lost its strangeness, his objections gradually diminished, and were ultimately replaced by a positive desire for the treatment. He then readily entered the chamber, resisted any attempts to remove him from it before he had had a full dose, was restless and uneasy on days on which the treatment was omitted, and, on two occasions on which he managed to make his escape from his cage, showed an evident desire to enter the chamber on his own account.

"The symptoms attending the process of inhalation were not invariably of precisely uniform character. As a rule they came on quietly and insensibly, and

consisted in steadily increasing drowsiness leading on to quiet sleep. During the course of exposure the conjunctiva and eyelids frequently became considerably congested; but this may, of course, have been merely dependent on direct irritation incident on their contact with the smoke. When removed from the chamber, ere profound sleep had supervened, the animal was evidently intoxicated. In many cases he was incapable of sitting up without supporting himself by means of grasping the bars of his cage, and, when less profoundly affected, was very unsteady on his legs. On being introduced into his cage, he not unfrequently, either at once or after a short delay, lay down and slept quietly for some time. On awaking from such sleep, as well as in those cases where sleep did not intervene, he almost invariably showed symptoms which appeared to indicate that he was for some time the subject of optical delusions. He gazed about attentively in directions in which nothing which seemed likely to excite his curiosity was present, and carefully scrutinized the floor of his cage for objects which did not exist. Such symptoms continued to persist for a considerable time after all other indications of intoxication had disappeared, continuing to manifest themselves in greater or less degree during the entire course of the latter portion of any day on which the treatment had been administered in the morning.

"On a certain number of occasions, however, the symptoms did not follow this normal course. On these the onset of signs of drowsiness was greatly delayed, and had hardly begun to show itself ere the animal was suddenly seized with violent general convulsions, and immediately thereafter became profoundly unconscious. The symptoms on the recovery of consciousness in no way differed from those in cases where the earlier ones had followed the normal course. No satisfactory explanation of the occurrence of such exceptional phenomena could be arrived at, and it must remain uncertain whether they are to be regarded as the consequence of certain temporary subjective peculiarities on the part of the animal or of variations in the quality of the drug.

"In no instance was there any appreciable indication of the development of any cerebral excitement either during the administration of the drug or after intoxication had been fully established. The normal symptoms were those of simple drowsiness and loss of will-power accompanied by optical delusions, those characterising the exceptional cases of temporary abnormal activity of the spinal cord and basal ganglia which may very probably have been dependent on diminution in the inhibitory power of the higher cerebral centres.

"The general health of the animal remained excellent during the entire course of the experiment, save for a period during the months of April and May, in which it suffered from dysenteric symptoms. The occurrence of these, however, cannot be in any way definitely ascribed to the use of the drug, as they are of frequent occurrence among monkeys in confinement apart from any special treatment. The only permanent appreciable effect resulting from the treatment manifested itself in the form of a very considerable diminution in appetite for food, which set in shortly after the initiation of the experiment, and thereafter remained persistent throughout its entire course.

"At the desire of the Hemp Drugs Commission, the experiment was brought to a close on the day following my return to Calcutta on the 12th of July 1894. Death was induced by means of prolonged administration of chloroform, and a

post-mortem examination was conducted immediately it had occurred. The results of this were as follows, in so far as mere casual naked-eye inspection goes; for I have already pointed out the detailed histological examination of the condition of the various organs and tissues is a matter not of a few hours, but of many weeks' work; so that it has been impossible for me to carry it out and at the same time to meet the wish of the Commission for the immediate submission of a report. Specimens of all the more important organs have, however, been carefully preserved, and will form the subjects of detailed histological examination hereafter.

"*Results of post-mortem examination of the animal.*—The body weighed 13 lbs. 7 oz., indicating a loss in weight of 2 lbs. 9 oz. during the eight months of treatment. This, or at all events the whole of this, loss is certainly not fairly creditable to the treatment, seeing that for a considerable period not long before the close of the experiment the animal had been subject to an attack of dysentery, which alone would have been sufficient to occasion considerable loss of weight.

"On laying the body open, the phenomenon which at once attracted attention, as unlike any ordinarily present in those of caged monkeys, was the great amount of fat accumulated in the omentum, the mesentery, and the visceral and parietal pericardium. This was specially noteworthy in connection with the markedly diminished ingestion of food which had characterised the subject of the experiment during the greater part of its course, and with the coincident considerable reduction in body weight which had occurred. The body generally appeared to be fairly well nourished, and a considerable amount of subcutaneous fat was present.

"The lungs were quite exceptionally healthy for a caged monkey, neither of them being in the least degree adherent to the thoracic walls; the left one being apparently perfectly healthy, and the right merely showing a few patches of deep congestion towards the base. Under the influence of the osmic acid contained in the fixing solution in which specimens of it were immersed, the muscular tissue of the heart shewed unequivocal signs of the presence of a certain amount of interstitial fat. Whether, however, these were due to true fatty degeneration of the muscular elements proper, or, as is more probably the case, to mere fatty accumulation in the connective tissues, must remain an open question until the detailed histological examination of the tissues has been carried out.

"The liver, spleen, and pancreas appeared to be perfectly normal, save that, as in the case of the cardiac muscle, a slight excess of interstitial fat made its appearance under the influence of osmic acid. The kidneys, the stomach, the large and small intestines, and the cerebro-spinal nervous centres were all apparently perfectly healthy.

"The only peculiar features in the body then which could in any way be rationally regarded as connected with the treatment to which the animal had been exposed were the excessive accumulation of fat in the tissue of the omentum, peritoneum, and pericardium, and the tendency to the establishment of a similar accumulation in the cardiac muscle, the liver, the pancreas, and the spleen.

"But the only persistent symptom attending the treatment during life was a considerable diminution in appetite for food, so that, in so far as the results of

a single experiment afford any ground for inference, it would appear that the most important effect of the habitual employment of inhalations of the smoke of ganja is to give rise to diminution in the normal processes of tissue-waste to such a degree that local accumulations of fat are liable to occur even in spite of the coincident and similarly originating diminution in the ingestion of food. The diminution in activity of the normal processes of tissue waste tends, on the one hand, to give rise to decreased ingestion of food, and, on the other, to local accumulation of fat in spite of this. But if the habitual practice of inhalations of the drug really do produce such effects, it is clear that, in place of being hurtful, it may be positively beneficial to people who are obliged to undergo exertions without having the means of procuring a diet fully adapted to make good the amount of tissue waste normally associated with them. As has been already pointed out, it is necessary to exercise extreme caution in coming to any definite conclusions from the experiment, first, because it is an isolated one, and, second, because the *post-mortem* examination has not yet been histologically completed; but the evidence which it has afforded is, in so far as it goes, rather in favour of the use of the drug under certain conditions than adverse to it."

All three forms of the drug considered together.

484. In considering the effects induced by drinking bhang and smoking charas or ganja, it must be remembered that the same active principle is present in all. The effects, therefore, induced by any one of the three drugs must necessarily depend upon the content of active principle, which is smallest in the case of bhang, and, theoretically at least, largest in charas, weight for weight. Practically it is impossible to compare with anything approaching to accuracy the physiological effects of the three drugs, because at present no definite active principle has been isolated. The alcoholic or other extracts from bhang, ganja, and charas are neither chemically similar in composition nor physiologically equivalent, weight for weight, in the effects they induce; and it is only possible, therefore, to approximately compare the physiological effects of ganja, charas, and bhang *inter se*. When, in addition to these initial difficulties, the disturbing factors, racial and individual idiosyncrasy and habit, come into operation, the question of the immediate effects of the drug becomes a most complex problem to deal with scientifically, or indeed even to generalize on in the broadest sense of the term. And, moreover, though the same active principle is originally present in all three of the drugs, yet when either ganja or charas is smoked, the active principle, not being volatile, must undergo decomposition, new products being evolved. Strictly, therefore, there can be no comparison between the physiological effect of the drug when introduced into the stomach as bhang and the products of the destructive distillation of ganja or charas when smoked and inhaled. And a writer on hemp drugs aptly remarks: "The action of hemp on man is so various that when we read the several descriptions given, differing so widely, we would scarcely suppose we were considering the same agent."

Immediate effects.

485. Judging from the replies of several witnesses, the immediate effect of the moderate use of any of the hemp drugs on the habitual consumer is refreshing and stimulating, and alleviates fatigue, giving rise to pleasurable sensations all over the nervous system, so that the consumer is "at peace with everybody"—in a grand waking dream. He is able to concentrate his thoughts on one subject: it affords him

pleasure, vigour, ready wit, capacity for hard work, and sharpness for business; it has a quieting effect on the nervous system, and removes restlessness and induces forgetfulness of mental troubles; all sorts of grotesque ideas rapidly pass through the mind, with a tendency to talk; it brightens the eyes, and, like a good cigar, gives content; the man feels jolly, sings songs, and tells good stories; it causes bravery in the brave and cowardice in the timid, and, like alcohol, brings out the real character of the man. In young men it may give rise to sensual thoughts, and aphrodisiac effects are mentioned. Some witnesses, on the contrary, state that the drug is not refreshing, and that the consumer is sometimes sleepy and sometimes talkative; or there is no tendency to talk: the conjunctiva become suffused and red, and the moisture dries in the throat and lips; the man becomes peevish, stupefied, sees double; and occasionally it may cause vomiting. Regarding the question of intoxication, witnesses speak of exhilaration and slightly dizzy sensation; a little intoxication, but no stupefaction; a feeling of "briskness" followed by sinking, but no stupefaction; a little heaviness in the eyes, slight narcotic effects, or stupor more or less complete. Others say that the first effect is exciting, then soothing; while some describe the effects as those of intoxication of varying degrees, from moderate to dead drunk. According to certain witnesses, the intoxication of hemp drugs differs from the alcoholic in that only those unaccustomed to the drug are affected, or that intoxication is not much marked in old consumers. Some witnesses state that the drugs allay hunger; others that these effects only result from excessive use; while others deny the power of the drug to allay hunger under all conditions apparently. Similar contradictory statements are made in connection with the alleged power of the drug to create appetite. On this point, however, it may be of interest to note that O'Shaughnessy, as a result of observation, records the fact that hemp drugs in small doses possess an extraordinary power of stimulating the digestive organs: "the appetite became extraordinary" is the remark he makes in describing the symptoms induced in certain of his students by the administration of ¼ grain doses of the resin. A Sind witness, No. 16, says: "It sharpens the appetite, and in this respect the action of the drug is certain and to be depended on." These are the immediate effects mentioned in the evidence. No doubt some of them would only result from an unaccustomed or excessive dose.

Duration of these effects.

486. In connection with the period during which the effects last, it is very difficult to arrive at any general conclusions, as so much depends on individual idiosyncrasy, on habit, dosage, and on the manner in which the drug is exhibited. According to Dr. Russell's experiments, the mental effects appear in from three to five minutes, and the drowsiness and restless sleep may last several hours in cases in which the drug was pushed to produce decided effects. Assistant Surgeon J. E. Bocarro gives fifteen minutes as the period at which intoxication commences after ganja smoking; in the case of charas, with the first pull at the *chillum*. In the case of ganja, the effects last from half to one hour or much longer, and in charas from fifteen to twenty minutes. With bhang the symptoms may set in from twenty to thirty minutes, or may be much delayed; and, according to Assistant Surgeon Bocarro, may last on an average two hours, or, according to a Bombay medical witness (No. 91), six to twelve hours. According to Dr. Russell's Assam experiments, the effects of two drachms of bhang drunk as *goonta* came on slowly and disappeared in three hours. With a solution of the resin in alcohol, thirty drops of the tincture

are stated to have induced slight excitement within half a minute, lasting for a few seconds. In fifteen minutes a feeling something allied to the early stage of intoxication came on. Three grains of extract gave rise to no symptoms for one hour (*Medical Times and Gazette*, 1852). Speaking generally, however, smoking produces far quicker effects than the exhibition of the drug by the stomach, as in the latter case in India the resin in bhang is associated with a large amount of inert insoluble matter, and absorption is thereby delayed; but with pure resin, administered in a finely divided state, absorption from the stomach may occur with great rapidity.

After effects.

487. Various replies are given regarding the after effects induced by the drugs. A very common answer to this question is that no immediate after effects are induced. Others say that "scarcely" any after effects follow the moderate use. Dr. Crombie (Bengal witness No. 104) says: "I have not seen any after effects in these cases, and have spent days in company with native boatmen habitually using ganja in moderation." Another witness states (Sind No. 20): "With bhang none of any importance. Ganja and charas, especially the latter, give rise to a dull frontal headache, singing in the ears, weakened mental power, much thirst, impair the appetite, constipate the bowels, and concentrate the urine." Other witnesses describe the after effects as laziness and languor, stupor, drowsiness, melancholy, weakness, laxity of the body, disinclination to do anything, exhaustion, depression, pains in the body, headache, giddiness, and gnawing at the stomach, nauseous taste in the stomach, and thirst. O'Shaughnessy gives a succinct account of the after effects of bhang and charas. In the case of bhang, "the intoxication lasts about three hours, when sleep supervenes; no nausea or sickness of stomach succeeds, nor are the bowels at all affected: next day there is slight giddiness and vascularity of the eyes, but no other symptoms worth recording." In the case of ganja, "heaviness, laziness, and agreeable reveries ensue, but the person can be easily roused, and is able to discharge routine occupations, such as pulling the punkah, waiting at table, etc." The Commission consider it very probable that in regard to the after effects of the moderate use of these drugs, the evil after effects described by some witnesses are really due to the excessive use, and that witnesses have not always discriminated between the effects of the moderate and excessive use of the drugs.

Replies to the question whether the want of subsequent gratification produces any longing or uneasiness are answered by some witnesses in the negative as regards moderate consumers; others say that a little longing or even uneasiness is experienced for want of gratification. There appear to be no valid reasons why the want of gratification of even a moderate habit should not cause "uneasiness" in some cases, and a "sensation of longing" in many: it is certainly the case with the majority of habitual moderate tobacco smokers, in whom the want of an accustomed smoke certainly does produce "longing," and which may even amount to "uneasiness" in some instances. In no case, however, is the longing or uneasiness experienced by users of hemp drugs for want of subsequent gratification comparable to the cravings of an opium smoker or eater. This matter has, however, already been discussed in dealing with the formation of the habit.

Classes who use the drugs as stimulants.

488. There are few, if any, classes of the community some members of which do not use hemp drugs in some form. There are religious objections to the use of intoxicants by Muhammadans, and these deter such of this class as are orthodox from indulging in these drugs. Many of the Hindus who are both orthodox and respectable consider it contrary to their religion to indulge in these or any other intoxicants, though many of the same class also believe that they may, at least occasionally at feasts, take bhang. Orthodox Sikhs do not smoke, and therefore regard ganja and charas as prohibited, though they do not see the same religious objection to drinking bhang. These are illustrations of classes which generally abstain. Members even of these classes are, however, found among the consumers of these drugs. It may be said probably with safety that there is no class of the community that does not to some extent partake of these drugs. At the same time consumption is in the main confined to particular classes. Ganja or charas is chiefly used by (1) "religious" persons, such as fakirs and wandering mendicants, sadhus and pandahs, the followers of Trinath, and other sects; (2) the lower classes of both Hindus and Muhammadans, such as artizans and cultivators, fishermen and boatmen, palki-bearers and day labourers, sepoys and night watchmen, wrestlers and athletes, Chamars and Domes, and others of the lower orders; (3) domestic servants of all kinds, especially those who, as syces, durwans, or dhobis, have especially trying work to do; (4) aborigines of different races, such as Sonthals, Gonds, and many more; (5) tradesmen, Kayasths, and others of the lower middle classes. These are among the classes specially mentioned by witnesses as smoking hemp drugs. Among the upper classes this habit is generally regarded as exceptional and indicating a special tendency to dissipation, but not so among these lower classes. Bhang is also used to some extent by these classes, but is more generally used by the more respectable middle and upper classes. Among those who are specially mentioned as habitually using it are Marwaris, Banias, and jewellers, sharp, intelligent, and successful tradesmen. Bhang is also occasionally used more or less generally by practically all classes on certain feast days and at times of social rejoicing. Like all intoxicants everywhere, the drugs are used in moderation, but more frequently to excess, by licentious and dissipated persons of all classes. Except, however, in the case of religious mendicants, the use by all the classes named above is generally moderate. Excess is exceptional.

Popular opinion regarding this use.

489. From what has been said above it will be expected that there would be many witnesses whose opinion regarding the use of these drugs as stimulants would not be favourable. The very great majority of witnesses in all provinces declare that this use of the drugs is regarded with disapproval by the people generally. This disapproval rests on several grounds. It depends partly on the classes using the drugs. Many witnesses point out that ganja is the cheapest intoxicant, and that it is principally used by the lower classes, while bhang is more used by the upper classes. They state that it is on this account that ganja smoking is regarded with much more general disfavour than bhang drinking. As one witness points out, the feeling is somewhat akin to that which some Englishmen who do not generally disapprove of stimulants have regarding a "vulgar taste for gin." On the other hand, the use of ganja by religious persons is not thus generally disapproved.

Many witnesses share the view which one witness tersely expresses thus: "Sanyasis are respected by the people; low caste people are not respected." There is no doubt that by far the greater part of the community abstain from any disapproval, and in fact are even strongly in favour, of the use of these drugs by religious persons, although that use is so often excessive. Mr. Monro (Bengal witness No. 206), however, records an instance of his having persuaded the people among whom he was working to dissociate ganja and holiness, so that "a sanyasi was laughed out of the town when I convicted him of habitually consuming ganja."

The disapproval of the use of hemp drugs by classes other than these religious classes is, as has been already indicated, based also on a religious objection to intoxicants still held by many, both Hindus and Muhammadans. There can be no doubt that this orthodox objection influences the public expression of opinion by many who have ceased themselves to share this religious sentiment. It is a respectable thing to denounce intoxicants; and it sometimes requires an effort for a witness to speak favourably or apologetically of intoxicants, especially of those which are used by the lower orders. Another ground for this expression of disapproval by so large a majority of the witnesses is the fact that so many of them have seen nothing but the excessive use. It cannot be too carefully remembered that the moderate use does not obtrude itself, and that much of the evidence given before the Commission deals in truth only with excess. Thus we find a large number of witnesses illustrating the popular disapproval of the drug by pointing out that "ganjeri" or "bhangi" (the names given to the consumers of ganja or bhang) is a term of great reproach. They point out that it means "one who acts as if he had lost all sense," an unreliable and despicable character. Other witnesses explain that these terms correspond to the English word "drunkard," and that the moderate use is not, so far as their experience goes, regarded with contempt at all. Akin to this is the natural desire expressed by several witnesses to assist the young in resisting the temptations of bad companions by establishing in their minds a wholesome antipathy to intoxicants of all kinds, excessive indulgence in which is followed by disastrous results, especially to the young.

Hemp drugs and alcohol.

490. In this connection it is well to notice the references made to alcohol. It is only a minority of the witnesses who compare alcohol and hemp drugs. But it is a striking fact that of these witnesses a majority of about three to one declare alcohol to be more injurious than hemp drugs. In every province the majority of the witnesses who make this comparison hold the view above expressed. This majority includes experienced officers of Government. Thus Colonel Hutchinson, Commissioner of Lahore (Punjab witness No. 4), says: "So far as effects have come to my notice, the effects of liquor are infinitely worse than those of drugs." Mr. J. B. Thomson, Collector of Allahabad (North-Western Provinces witness No. 2), gave evidence to the following effect: "I remember no case from which I can deduce the theory that the use of the drugs is in any way connected with crime; that is to say, from my own personal experience. I cannot say the same regarding alcohol even among natives of this country." Similarly, Mr. Toynbee, Commissioner of Bhagalpur (Bengal witness No. 4), says: "I have never had persons pointed out to me as social wrecks from the effects of ganja. As far as I have seen, many more cases of evil effects from alcohol than from hemp have come before me."

And Colonel Bowie, Commissioner in the Central Provinces (witness No. 2), says: "I can call to mind a great many cases which I have had to deal with as a Magistrate and as a Sessions Judge, in which serious hurt and homicide have been caused by persons under the influence of alcohol, but not a single case of crime of any kind which had been committed under the influence of bhang or ganja." Representative officers from other provinces might be quoted, such as Mr. Vidal or Mr. Campbell, C.I.E., in Bombay, or Mr. H. E. M. James, Commissioner in Sind. The Rev. Mr. Laflamme (Madras witness No. 153), who took much pains in collecting information, gives evidence in the same sense. It is, however, in the northern provinces that there is most experience of these drugs. The only officer of standing in Upper India who holds the contrary view is Mr. T. Stoker, Excise Commissioner, North-Western Provinces (witness No. 6), who says: "I put these drugs above liquor and opium in their injurious tendencies." In saying this, he differs, however, both from his predecessor, Mr. R. Wall (witness No. 233), who held the office for eleven years, and from the Hon'ble A. Cadell (witness No. 1), who is the Member of the Board of Revenue in charge of Excise.

The opinion that alcohol is more injurious than hemp drugs is also expressed by leading Native gentlemen in these provinces, such as Maharaja Bahadur Sir Jotindra Mohan Tagore, K.C.S.I. (Bengal witness No. 163), Munshi Newal Kishore (North-Western Provinces witness No. 231), Babu P. C. Chatterji, Judge, Chief Court (Punjab witness No. 76), and the Hon'ble Gangadhar Madho Chitnavis (Central Provinces witness No. 46). The first of these only need be quoted. He says: "The use of the aforesaid indigenous drugs appears to me to be preferable to the use of ardent spirits and wines now rapidly replacing them to the great injury of the moral and material well-being of our people. Prohibition, I fear, would lead many to take to the use of ardent liquors, and this, in my humble opinion, would be replacing one evil by another of still greater magnitude." These views are held by the great majority of the native witnesses who make the comparison between hemp drugs and alcohol; and there is really no witness of authority on the other side.

This is also the opinion of medical witnesses who make this comparison. It is no doubt an accepted and established opinion among medical men that the evil effects of alcohol are intensified in the tropics. This may explain the very strong opinion held regarding alcohol. Perhaps it is unnecessary to refer to more of these witnesses than to two of more than ordinary experience who take a very strong view of the deleterious character of hemp drugs if used to excess, but a still stronger view regarding alcohol. Surgeon-Lieutenant-Colonel Crombie says: "I believe that the habit of using ganja moderately is absolutely harmless; but I think even the moderate use of alcohol is liable to produce tissue changes in the long run. Further, I here refer entirely to the native community; and it is my observation that when a native takes to alcohol, it is extremely difficult for him to remain moderate; and in life assurance work, of which I have a good deal, I always advise an extra premium in the case of any native who indulges in alcohol even in the most moderate way, and utterly refuse to accept a native life if there is evidence of the consumption of alcohol to any considerable extent which would still be considered moderate in the case of Europeans. My experience leads me to hold the same views of the effects of alcohol on the lower classes.

A native who takes to liquor is lost. As regards the excessive use, I would still place alcohol first. I regard it as most deleterious." The only other medical man who need be quoted is Dr. H. M. Clark, a well-known Medical Missionary in the Punjab (witness No. 46), who says: "As regards charas, I think there can be no such thing as moderate use, if we mean such use as will not leave any permanent bad effect on the system. In whatever quantity it is used, it is bound to be deleterious. I should say that in this country alcohol does more harm than charas." These views are supported by distinguished native medical men like Rai Bahadur Kanny Lall Dey, C.I.E. (Bengal witness No. 117), and others.

It is not within the province of the Commission to come to any definite finding on this evidence as to the comparative effects of alcohol and hemp drugs. The effects of alcohol were not within the scope of the inquiry. As has already been stated, it is only a minority of the witnesses who make the comparison. It was not asked for in the Commission's questions, and has only been incidentally made by certain witnesses. The Commission have not felt called on to test the correctness of the views of the witnesses on this point, as this could only have been done by a full inquiry into the effects of liquor. But it is important to observe the existence of these views. In this connection it is interesting to notice the existence in certain parts of the country of a belief among ignorant persons that "the attack on hemp drugs was due to a desire to foster European liquor" (see the evidence of Mr. William Almon; Assistant Collector, Abkari Department in the town of Bombay, witness No. 38); or, as another witness puts it, "the agitation is attributed to them who are anxious to encourage the spread of alcohol, *i.e.*, the persons who import and manufacture liquor" (V. K. Joglekar, Bombay witness No. 110). The existence of such misapprehensions can only be explained by the difficulty felt in accounting for an agitation against these drugs alone. The Rev. Mr. Laflamme (Madras witness No. 153) says: "Many are surprised to hear that the Government is concerned about a practice which is confined to so small a portion of the people as is ganja and bhang, and is not concerned about the widespread, rapidly increasing, and much more injurious habit of alcoholic drink, from which much greater harm results. I have been six years in the country, and engaged in village work during four years. Before entering on these inquiries I did not know the hemp drugs were in use among the people, and had only met with them in the temples." One witness of much experience (Khan Bahadur Kadir Dad Khan, C.I.E., Sind witness No. 4) says: "All classes of the people, from the most influential spiritual leader to the lowest beggar, will say that the British Government, while not interfering or prohibiting the use of alcohol in their own country, are stopping them here from the use of less intoxicating drugs, which they have been using from time immemorial, and which is also religiously respected."

Injurious effects of hemp drugs (history).

491. Among the ancient physicians the evil effects of the drug are thus referred to by the author of the Makhzan-el-Adwiya: "Afterwards the sedative effects begin to preside, the spirits sink, the vision darkens and weakens, and madness, melancholy, fearfulness, dropsy, and such like distempers are the sequel, while the seminal secretions dry up." Alluding to its popular use, the author dwells on the eventual

evil consequences of the indulgence: "Weakness of the digestive organs first ensues, followed by flatulency, indigestion, swellings of the limbs and face, change of complexion, diminution of sexual vigour, loss of teeth, heaviness, cowardice, depraved and wicked ideas, etc." Iban Beitar was the first to record its tendeney to produce mental derangement, and he even states that it occasionally proves fatal. Taki-ed-din-Ahmad, commonly known as Makrizi, who wrote a number of treatises upon Egypt in the 14th century, states that in 780 Hijra very severe ordinances were passed in Egypt against the use of the drug; the famous garden in the valley of Dijoncina was rooted up, and all those convicted of the use of the drugs were subjected to the extraction of their teeth; but in 799 Hijra the custom re-established itself with more than original vigour. Makrizi states: "As its consequence, general corruption of sentiments and manners ensued, modesty disappeared, every base and evil passion was openly indulged in, and nobility of external form alone remained to these infatuated beings." Rumphius alludes doubtingly to the alleged aphrodisiac powers of the drug, and states that the kind of mental excitement it produces depends upon the temperament of the consumer. O'Shaughnessy in his introduction to certain experiments with hemp drugs remarks; "As to the evil sequelæ so unanimously dwelt on by all writers, these did not appear to us so numerous, so immediate, or so formidable as many which may be clearly traced to over-indulgence in other powerful stimulants or narcotics, *viz.*, alcohol, opium, or tobacco." O'Shaughnessy also refers to insanity occasioned by continued hemp inebriation as follows: "Before quitting this subject, it is desirable to notice the singular form of insanity which the incautious use of hemp preparations often occasions, especially among young men who try it for the first time. Several such cases have presented themselves to our notice. They are as peculiar as the 'delirium tremens' which succeeds the prolonged abuse of spirituous liquors, but are quite distinct from any other species of madness with which we are acquainted. The state is at once recognized by the strange balancing gait of the patient, a constant rubbing of the hands, perpetual giggling, and a propensity to caress and chafe the feet of all bystanders of whatever rank. The eyes wear an expression of cunning and merriment which can scarcely be mistaken. In a few cases the patients are violent; in many highly aphrodisiac; in all that we have seen voraciously hungry. There is no increased heat or frequency of circulation or any appearance of inflammation or congestion, and the skin and general functions are in a natural state. A blister to the nape of the neck, leeches to the temples, and nauseating doses of tartar emetic with saline purgatives have rapidly dispelled the symptoms in all the cases we have met with, and have restored the patients to perfect health." This description of what O'Shaughnessy considered hemp drug insanity is of considerable interest. It is clear from his account that the symptoms were of short duration, almost typical, and that under treatment recovery was rapid. Such cases as those described by O'Shaughnessy are probably similar to the class of cases which have occasionally come before the Commission as having occurred while under observation of the certifying medical officer, and which on reaching the asylum were sane. They were probably more of the character of intoxication than of insanity. The curious point, however, in connection with O'Shaughnessy's account of hemp drug insanity is the absence of all information as to cases of longer duration, such as the class of

cases now met with in asylums and attributed to hemp drugs. And this omission is all the more striking because O'Shaughnessy had devoted special attention to the subject of hemp drugs, and indeed was the first to draw the attention of European practitioners to the value of the drug as a remedial agent; and it is hardly possible that if in his day any large number of persons insane from the alleged use of the drug had been admitted into asylums, he would have been ignorant of the fact and omitted to notice it in his account of the effects of the drug.

Effects in other countries.

492. The action taken in Turkey, Egypt, Greece, and Trinidad in the direction of the prohibition of the use of hemp drugs will be noticed later (*vide* Chapter XIV.) The Commission have not before them material to enable them to judge of the statements regarding the effects of the drugs in these countries which formed the basis of the action taken. The note drawn up in 1890 by the Sanitary Board of Greece, on which the action in that country was based, contains a statement of the effects of the drugs as alleged to have been ascertained (*a*) by scientific inquiry in India and other "warm countries" by experts, among whom O'Shaughnessy is specially mentioned, and (*b*) from statistics of the Indian (and especially the Bengal) lunatic asylums. But there is nothing given in original of the views of any of the experts named. The views of O'Shaughnessy and the Indian asylum statistics are already before the Commission. They have therefore no new material in this note. They are compelled therefore to set it aside. For the same reason they find themselves unable to arrive at any opinion in regard to the recent controversy between Dr. Ireland and "Pyramid" in the *British Medical Journal* regarding the effects of the drugs in Trinidad and Egypt. They pass on, therefore, to the evidence available in this country.

Failure of witnesses to distinguish excessive from moderate use.

493. In order to ascertain the alleged noxious physical, mental, or moral effects which are popularly believed to be induced by use of hemp drugs, the Commission considered it desirable in framing the questions on these points to clearly discriminate between the *moderate* and *excessive* use. The replies show, however, that in very many instances the witnesses have failed thus to differentiate between the two uses of the drug. This may be partly due to the somewhat inherent difficulty in discriminating or to carelessness on the part of persons who conducted the inquiries. The evidence, moreover, before the Commission clearly demonstrates that any departures from the normal in health, if associated with the mere mention of the hemp drug habit, is in most cases sufficient for "cause" and "effect".

Medical witnesses.

494. In analyzing the replies given to question No. 45, which deals with the alleged noxious effects of the moderate use of the drugs, the Commission have thought it expedient to indicate first the view taken by the medical witnesses, and then to consider the tenor of the evidence given by all witnesses, including medical. In considering the medical evidence, the witnesses have been divided into three classes—(*a*) superior medical officers, including assistant surgeons; (*b*) hospital assistant class; (*c*) native practitioners who have not been trained in Medical Colleges, and who practise according to native methods. In estimating the value which should be

attached to the evidence tendered by each of these classes, the Commission consider it necessary to point out that the superior medical officers are by their training necessarily in a far better position to judge intelligently of the effects of the drugs than the other two classes; but the superior medical officer class comprises both European doctors and assistant surgeons. The former class—in all but exceptional instances—do not see nearly so much of the common or general dispensary practice as the assistant surgeons. Though at head-quarters they visit the dispensaries as regularly as possible, and see some of the patients and assist in prescribing, they are rather the "superintendents of the dispensaries," and occupy generally a position more or less of "consultants" to the assistant surgeons, who actually conduct dispensary practice, and who diagnose the ordinary diseases and prescribe for them. It therefore appears to the Commission not unlikely that the views of most European medical officers may have been based on less direct contact with the people, and may have even been sometimes derived more or less from the assistant surgeons, their immediate subordinates. The hospital assistants as a class are much inferior to assistant surgeons in medical training and general intelligence; but they possess one advantage over the assistant surgeons. From their inferior social position they have a more intimate knowledge perhaps of the habits of the persons who frequent dispensaries, and who constitute the class to which hemp-drug consumers belong. The native practitioners probably have a still more familiar knowledge of the habits of the people; but the absence of systematic training renders them practically incompetent to form a true estimate of "cause" and "effect," and their ideas of the noxious effects of the drugs are doubtless largely coloured by the popular and common views on the subject.

General view of the whole evidence regarding evil effects.

495. In respect to the evil effects—physical, mental, and moral—ascribed to the habitual use of these drugs, there is one feature that must strike any one who reads the evidence—that is, the large number of witnesses who do not answer at all the questions (No. 45 and No. 46) regarding evil effects. Among Europeans over one-half of the witnesses and among Natives about one-third abstain from answering. This must be due in large measure to the fact that the effects have not obtruded themselves on observation. This is what is stated over and over again by witnesses of the greatest experience. Of those who do answer, about one-half of the Europeans and one-third of the Native witnesses ascribe no evil effects at all to the moderate use of ganja and charas. Those witnesses who specially mention bhang do so, as a rule, to except it from their statement regarding the evil effects alleged to result from hemp drugs generally. These are not, however, very numerous. It is unnecessary to do more than take up the evidence regarding hemp drugs generally. About one-half of the European witnesses and two-thirds of the Native witnesses who answer at all the question regarding the alleged evil effects of the moderate use do so in the affirmative. But of these about one-half of both classes do not discriminate between the moderate and excessive use. They answer generally concerning the use of the drugs without drawing the line between moderation and excess. The number of witnesses who really give evidence to the effect that the moderate use of these drugs causes injury is therefore less than those who distinctly affirm that they do not, and forms but a small fraction of the whole body of witnesses. The evidence regarding the evil

effects of the excessive use is much stronger. The number of witnesses who are able to give information is indeed much smaller than might have been expected, and certainly indicates that the evil of excessive consumption is not widespread. But of those who do speak of the effects of excessive consumption, the very large majority state that they are evil. There are very few exceptional witnesses who allege that the excessive use does no harm. This is precisely what might have been expected. The excessive use of any intoxicant cannot be other than evil, and in the great majority of cases of excess the evil must be manifest.

The general character of the evidence.

496. The impressions which the evidence leaves on the mind are these. The evil results from the use of the drugs, whether moderate or excessive, have not hitherto obtruded themselves on observation. The only manner in which they have really attracted attention is in respect to asylum statistics. Apart from this, the majority of witnesses have not seen the effects at all, and know nothing about them. Of the minority, a few witnesses only have had their attention drawn to the effects before this inquiry began; the rest knew nothing of them until they began to search them out on receipt of the questions issued by the Commission. Some of these witnesses fail to remember that in going to public places, such as shops or shrines where smokers congregate, to ascertain the effects, they have taken measures to see not the moderate, but the excessive, use of the drugs. They thus fail to discriminate between the moderate and excessive use. Their evidence is as unfair a representation of the general effects of the drug as would be the evidence of men regarding the general effects of alcohol who judged of these effects solely from what they saw in public houses in England. Further, a great deal of the evidence is based upon a casual observation of very few cases of actual consumers. The number of cases seen by a witness is as a rule too few to form an adequate basis for definite opinion in respect to results. Yet there are but few witnesses who have seen and admitted this necessity for caution in the expression of opinion. Again, these cases are not only few in number, but as a rule very inadequately observed. There are very few of them indeed which have been known to the witnesses in any way intimately or for any length of time. Occasionally a case is mentioned of a relative or personal acquaintance who has been seriously injured by excess. But as a rule the cases mentioned have been cases of wandering mendicants, devotees at temples or strangers in the street, cases observed in a shop visited for the purpose, or in a collection of social wrecks brought together for the witnesses' inspection, or (in the case of medical witnesses) outdoor patients who have come casually for relief, and whose history is unknown. Clearly these are not cases on which satisfactory conclusions can be based. It must be impossible to say with anything like certainty what features from among the physical, mental, and moral features of the case are due to circumstances and causes antecedent to or independent of the hemp drug habit, and what (if any) may be reasonably ascribed, and in what degree, to that habit.

The necessity for testing it.

497. The result of this has been to make much of the evidence vague and unsatisfactory. It has been deemed necessary, therefore, to make an effort to sift and test the evidence. It can hardly be considered necessary to question the view that excessive con-

sumption of these drugs indicates and intensifies mental and moral weakness, and must also be attended in all but exceptional constitutions with some visible physical injury. In regard to the moderate use, on the other hand, it would be quite wrong to accept without clear evidence the view that physical, mental, and moral injury resulted. In the absence of all physiological evidence of tissue changes being produced by these drugs, as they are produced by alcohol, it must be presumed, until the contrary appear, that the moderate use does not cause injury in any but the most exceptional cases. General experience warrants the admission that even the moderate use of such drugs may cause injury in exceptional cases owing to idiosyncracy or peculiar diathesis. But as a rule, practically without exception, the presumption must be against injury from the moderate use. It is necessary then to weigh the evidence carefully so as to ascertain both whether there is any ground for believing that the moderate use is attended by evil results at all, and also what the particular results are which under any circumstances follow the use of the drugs.

Limitation of the issues raised.

498. Leaving out of account for the present the question of the connection of the drugs with insanity, there is no evidence of any weight regarding mental and moral injury from the moderate use of the drugs. Vague statements are made by a small minority of the witnesses regarding the stupidity or moral weakness of consumers whom they have met. But after making allowance for the fact that these observations have often been of excessive consumers, and for the lower mental and moral tone found generally among the lower orders to which the consumers, or at all events the smokers of hemp drugs, almost exclusively belong, there is little left in the evidence on which to base any opinion. The statements, too, are of results of an indefinite character and difficult to gauge or account for even with careful observation of the whole history of a case which is never possible in the instances adduced. Similarly, in regard to physical injury, there are a considerable number of vague statements made regarding "impairment of constitution," debility, emaciation, and other physical results of an indefinite character. These are largely accounted for by the mere fact that it is the poorer classes who ordinarily use these drugs. The poor cultivator or day labourer, who works hard and has nothing but a bare sufficiency of the necessaries of life, cannot be expected to be sleek. Witnesses who have spoken of the use of hemp as making men thin and ill-nourished looking have admitted that their experience is based only on what they have seen of the poor, and that among the poor there is no specially marked appearance of this kind among the consumers of hemp. A similar fallacy is noticed by several witnesses. They point out that the drugs, which are more used in malarious and unhealthy tracts than elsewhere, are credited with the evil effects which result from the malarious and unhealthy conditions. As a matter of fact, the moderate consumer in such localities cannot, they say, be distinguished from the non-consumer. Then, again, a great deal of the vague evidence regarding the general injury to the constitution alleged to result from the use of hemp drugs is based on what the witnesses know of fakirs and wandering mendicants who consume the drugs. It is surprising to find witnesses who have had years of experience, whose work has brought them into close contact with the ordinary life of the people, testifying that they have never seen the drugs used except by religious mendicants, or known any of the effects of the

drugs except as shown in these classes. The mendicant, if he is ascetic, is naturally of a very spare and even emaciated appearance. The use by such mendicants is better known to the community generally than the use by any other class. The mendicant pushes himself to the front wherever he goes, and he has no hesitation in asking for precisely the thing he wants at the time. His use of hemp is therefore known to all who meet him. The life he leads—a wandering, homeless life of exposure and self-imposed privation and unrest—makes him as a rule thin and miserable in appearance. This appearance of the man, an unknown stranger, once seen perhaps as he passes through the village on his round of India, and never seen again, is often associated in the mind of the witness with the use of hemp and not with the life that really produces it. Allowance must also be made for the large proportion of cases of excess which must have been found among the comparatively few cases observed by the witnesses. The religious mendicant, for example, uses hemp drugs very frequently to excess; and this is the class which has hitherto attracted most the attention of the witnesses. As to the cases seen since the Commission's questions drew attention to the subject, it must be borne in mind that they are of necessity chiefly cases of excess. A Civil Surgeon asks a native practitioner to show him cases of the effects of hemp drugs, and the latter selects a broken down consumer from among his patients and produces him. The Civil Surgeon forgets that he has never himself in years of experience seen the effects of the drugs; he forgets that unless the consumption of hemp is most exceptional, or his friend's practice exceedingly small, it is only to be expected that there should be consumers among his patients; and he accepts the case as an illustration of the ill effects of the drugs. A Collector asks a subordinate to collect the consumers in a town or village, and the subordinate gets together the social wrecks from among the consumers of the drugs. No one would willingly join such a party for inspection except dissipated and degraded persons. Yet the Collector, without remembering this, and without enquiring how many of these social wrecks are also consumers of alcohol and other intoxicants or are addicted to other vices, thinks he has got hold of something tangible to enable him to judge of the effects of the drugs. Similarly the missionary, anxious to assist in this inquiry, goes to the drug shop, and sees the habitual excessive consumer at his pipe. Perhaps he finds him a lean, miserable man, though indeed some witnesses of this class have evidently been agreeably surprised at what they have seen. The witness is, however, led as a rule to ascribe anything of misery or evil that he sees to the drug about which he is interested without considering that he knows nothing of the history or circumstances of the men whom he thus meets for the first time. Such mistakes are not confined to European witnesses. Native witnesses of all classes have similarly searched out cases of evil results ascribed to hemp drugs, have obtained assistance in collecting them, have visited the places where consumption to excess is practised, and have often given what they have learned in this hasty inquiry as the undoubted and inevitable effects of the use of the drugs. The mere fact that they had no information to give without making inquiry, and that the effects of the drugs had never attracted their attention before in all their lives, should have warned them of the necessity for caution in generalising from the limited experience they had thus specially to acquire. The difficulty, if not impossibility, of judging under the circumstances in almost any case whether

the conditions observed were due to such general causes as poverty or malaria, or to such special causes as vicious or dissolute habits or even disease, quite apart from hemp drugs, has been too often forgotten. And the evidence is vague and unreliable. On the whole, then, it seems best to devote attention to clear and definite issues, and to discuss under physical effects the alleged causation of specific diseases like dysentery, bronchitis, and asthma which are frequently mentioned; under mental effects, the alleged causation of insanity; and under moral effects, the alleged connection between hemp drugs and crime.

CHAPTER XI.

EFFECTS—PHYSICAL.

Medical evidence regarding dysentery, bronchitis, and asthma.

499. In regard to these definite physical results, the only evidence to which much weight can be attached is the evidence of the medical witnesses. From their training and opportunities of observation they are the only witnesses qualified to give reliable evidence. It is proposed to examine this medical evidence in detail.

Bengal.

500. In Bengal eight commissioned medical officers were examined on the effects of the moderate use of the drugs. Surgeon-Lieutenant-Colonel Russell (witness No. 105), 20 years in civil employ in Bengal and Assam, a witness whose evidence has frequently been quoted by the Commission, stated that the use of the drug does not cause bronchitis, dysentery, or asthma, and that scarcely any other noxious effects are induced. Surgeon-Lieutenant-Colonel Russick Lall Dutt (witness No. 107), an officer of over 20 years' experience, stated: "Very moderate smoking of ganja or charas or moderate drinking of siddhi in infusion do not produce any appreciable effects.....but these moderate cases are seldom long-lived. There is in them a slow and insidious undermining process going on in their digestive, respiratory, and nervous systems, which predispose them to acute diseases and cut their lives short." Surgeon-Lieutenant-Colonel Price (witness No. 108), of 21 years' service, who had frequently come across consumers of hemp drugs, was unable to answer the question regarding effects. Surgeon-Captain Prain (witness No. 113) stated: "I do not believe that the habitual moderate use of any of these drugs produces any noxious effects—physical, mental, or moral. I think that perhaps the use of bhang does injure the digestion and impair appetite even when used moderately, but I am convinced that it neither causes dysentery, bronchitis, or asthma." Surgeon-Major Cobb (witness No. 110) stated that the drugs did not cause asthma, bronchitis, or dysentery; and in cross-examination he stated: "I have no experience that the *excessive use* of the drug produces dysentery and bowel-complaints." Surgeon-Lieutenant-Colonel Flood Murray (witness No. 102), five years in military service and nineteen years in civil employ, quoted the opinion of a pandit whom he consulted regarding the ill effects of the drugs. In cross-examination he stated: "The general statement as contained in my written answer is a statement made to me by this hakim and others to whom I applied for information. *My own experience in no way corroborates it.*" "Surgeon-Lieutenant-Colonel Bovill (witness No. 109), of 21 years' service, stated that the habitual moderate use of bhang does not produce any ill effects, and in many cases that of ganja is equally harmless. He added: "I know of no case where it has caused bronchitis, dysentery, or asthma, but I have noted hoarseness of the voice probably due to some laryngeal irritation among ganja smokers." Surgeon-Lieutenant-Colonel Crombie (witness No. 104), of over 20 years' service, is not aware of any ill effects being produced by the moderate use of the drugs; but he added: "If any were produced, the use would no longer be moderate, but excessive:" In cross-examination Dr. Crombie stated: "I have had no experience of any diseases attributable to ganja. My experience has been chiefly in Eastern Bengal, where ganja is largely consumed."

Twenty-three assistant surgeons were examined. Assistant Surgeon Devendranath Roy (witness No. 123), of over 20 years' service, and who has had service in Rajputana, the North-Western Provinces, Behar, and Bengal, where hemp drugs are used by a large portion of the people, is of opinion that those who smoke ganja not more than twice or thrice a day do not suffer in general health; bhang does not impair the digestion, whereas ganja does. "Those of my patients," he remarks, "who admitted having been habitual ganja smokers suffered from dysentery or diarrhœa, but they have been exposed to conditions which produce these ailments. Hence I do not draw any conclusion as to ganja being a primary cause of those diseases." Assistant Surgeon Preonath Bose (witness No. 122), Teacher of Materia Medica and Pharmacy in the Dacca Medical School, clearly has no personal knowledge of the effects, as he remarked: "Evidence on these points is conflicting. Some of the consumers maintain, others deny, that evil effects are produced." Another teacher at the same school (witness No. 121) stated: "Evidence on these points is conflicting. The general consensus of opinion is that the habitual moderate use of bhang and ganja does not impair the constitution." Assistant Surgeon Soorjee Narain Singh, of 28 years' service, now Teacher of Materia Medica, Patna Medical School (witness No. 125), stated that "habitual moderate consumers of bhang, ganja, or charas do not apparently suffer from any injurious effects." Assistant Surgeon Narendra Nath Gupta (witness No. 120) as Deputy Superintendent of Vaccination and as a Deputy Sanitary Commissioner and as Civil Medical Officer has had considerable opportunities for noting the effects of the drugs. His opinion is that the moderate use of ganja and bhang does not produce any noxious effects. Durga Dass Lahiri, L.M.S. (witness No. 132), a private medical practitioner, said: "I have not seen any evil results mentioned when taken moderately, but it is very difficult to keep to moderation." Assistant Surgeon Taraprosanna Roy (witness No. 116) is Chemical Examiner to the Government of Bengal. He stated that the habitual moderate use of the three drugs is not known to produce any noxious effects. Assistant Surgeon Bosonto Kumar Sen (witness No. 119) has had service in ganja producing districts. He stated that the use of ganja and bhang produces noxious effects, and "generally produce dysentery, asthma, and bronchitis." The cross-examination of this witness is of interest. "I have seen more than one person, about half a dozen, in my village.....suffering from dysentery, bronchitis, and asthma who were also ganja smokers. *They were all excessive smokers.* These effects do not follow the moderate, but the excessive, use. It is a mistake to have put them under the moderate use.....The fact that they were ganja smokers led me to believe that these effects were due to ganja.....I have no recollection of ever treating any case of dysentery, bronchitis, or asthma caused by ganja. *These cases are the basis of my remarks.* I do not remember any case of dysentery, bronchitis, or asthma in a ganja smoker which I attributed to any other cause. In other words, when I saw ganja smokers suffering from these diseases, I attributed them to ganja. *This was twenty years ago,* before I was a medical student." Pyari Sankar Dass Gupta, L.M.S. (witness No. 134), is a private medical practitioner, Secretary to the Bogra Medical Society of ten members, and a member of a temperance association founded by the late Keshub Chunder Sen. The witness is pledged against the use of all intoxicants. This witness submitted three papers to the Commission which seem to illustrate the development of tradition into opinion. In one paper the witness states: "The smokers of ganja often suffer from hoarseness of voice

produced by the continual inhalation of its fumes, giving rise to sore-throat, bronchitis, and carbonaceous phthisis.....It has long been *a tradition* in our country that the *ganja-khors* always die of dysentery, their intestines gradually sloughing away." In his second paper the witness states: "Ganja smokers generally die of bloody dysentery, asthma and phthisis, and hæmoptysis." And in his last paper he says: "It produces bloody dysentery and chest diseases, blood-spitting, bronchitis, asthma, and phthisis." Kailas Chundra Bose, L.M.S. (witness No. 135), is a private medical practitioner in Calcutta with an extensive practice. He states that no ill effects are produced by the moderate use, and that, instead of causing bronchitis, dysentery, or asthma, it relieves these affections. The witness, however, states in his oral examination: "My experience is not to any large extent what I have gathered in my practice, but rather what I have learnt from smokers." Assistant Surgeon Akbar Khan (witness No. 124) is another Teacher in the Patna Medical School. He states the habitual moderate use of any of the drugs does not produce noxious effects, but that charas and ganja cause dysentery, bronchitis, and asthma if the consumers are not well fed. Witnesses Nos. 126 and 138 consider that no ill effects are produced. Assistant Surgeon Upendra Nath Sen (witness No. 118) states that bronchitis and asthma are common complaints of ganja smokers. Madhab Krishna Dass, L.M.S. (witness No. 158), a private practitioner in Calcutta, considers that smoking may cause dysentery, bronchitis, or asthma. Assistant Surgeon Durga Nath Chakravarti (witness No. 150) considers that "ganja causes dysentery after a long run." Annoda Prasanna Ghatak, M.B. (witness No. 148), a private medical practitioner, considers that digestive complaints are caused when good food is not procurable. Rakhal Das Ghosh, L.M.S. (witness No. 149), a private practitioner in Calcutta, had apparently seen no ill effects caused by the drug. The remaining witnesses in this class clearly failed to discriminate between the moderate and excessive use, and their evidence has not been considered.

Three hospital assistants were examined. One gave no reply regarding moderate use. The other stated: "The habitual moderate use of ganja or charas does not produce any noxious effects—physical, mental, or moral; but the use of ganja impairs the constitution in some way or other.....and has a tendency towards bronchitis and asthma." Witness No. 145 is a vernacular class hospital assistant, but not now in Government employ. According to this witness, moderate use of ganja leads to excessive use. "The habitual moderate consumers, as well as the excessive consumers, suffer in their lungs and become insane.....No intoxicant can be taken in moderation except when administered medicinally."

Fifteen native practitioners were examined. Bijoya Ratna Sen (witness No. 151), a kabiraj practising in Calcutta, considers that the habitual moderate use of ganja or charas, but not siddhi, may in some cases cause bronchitis, dysentery, or asthma. Witness No. 152, also of Calcutta, gives the same reply couched in the same language. Witness No. 126, of Nattore, in the Rajshahi district, and witness No. 153, of Calcutta, both consider the moderate use harmless. Piyari Mohan (witness No. 154), a kabiraj, states: "I know it causes dysentery, and I believe owing to its heating power it can cause bronchitis and asthma." Kedareswar Acharjya (witness No. 137) remarks: "Those ganja smokers who cannot command abundant wholesome food suffer from dysentery, but it is difficult to determine how far it is due to ganja or to improper food. As to asthma, I have not seen any typical case originating from ganja smoking. I know that a chronic catarrhal condition of the air passages with a certain amount of spasm is the misfortune of

many old ganja smokers. I know a friend who suffered from chronic bronchitis, and in whom asthmatic fits were induced by attempts to smoke ganja." The witness refers also to another case in which a habitual ganja smoker had an asthmatic attack "which subsided on breaking off the habit and reappeared on resuming it." This witness lays stress on personal idiosyncrasy as modifying the effects of the drugs, and on the importance of a diet rich in fat. Witness No. 155, another kabiraj, states that, while no ill effects are produced, occasionally it causes dysentery, bronchitis, and asthma. Witness No. 128, also a kabiraj, states that, according to the Aurveda Shastra, smoking these drugs causes bronchitis and asthma, and in his opinion "even the moderate use of any of these drugs, not according to the rules of Shastra, is injurious in its effects." This witness does not appear to have any personal knowledge of ill effects, but to base his views on the teachings of the Shastras. Witness No. 139 states: "Certainly they produce noxious effects on the moral and physical constitution;" but as the witness is silent as to the effects of excessive use, probably he has not discriminated between the two uses of the drugs. Witness No. 157, a vaid, considers that even the habitual moderate use of these drugs produces noxious effects. This is the pandit who was consulted by Dr. Flood Murray (witness No. 102), and who produced two cases of hemp drug asthma and weakened heart for Dr. Murray's inspection. These seem to have been the only cases in any way connected with hemp drugs that he had. Witness No. 146 is a zamindar and medical practitioner, and does not reply as to effects. Witness No. 147 studied two and a half years at the Calcutta Medical College, but took no degree. He states that no noxious effects are produced without giving details.

Assam.

501. Three commissioned and three uncovenanted medical officers were examined in Assam. Surgeon-Major Macnamara (witness No. 20) has been for thirteen years among people who make use of hemp products to a greater or less degree. He is Civil Surgeon of Tezpur, and has had opportunities of observing the effects of the drug on tea garden coolies. Regarding the effects caused by the moderate use of the drugs, the witness remarked: "I can't define moderation no more than I can in the case of alcohol. The limit is reached when any ill effects are apparent when the limit is crossed. The constitution is impaired and digestion is injured. Dysentery, bronchitis, and asthma find an easier victim." On cross-examination, the witness stated: "In regard to the effects of the drugs, I mean what I have seen in people taking the drugs just as I know the effects of alcohol. I have never seen a man actually taking ganja, although I have tried to get people to do so." Surgeon-Major H. C. Banerji has had 14 years' service, out of which five years have been passed as a Civil Surgeon in Assam. This officer considers that bronchitis, asthma, and dysentery are not produced by the moderate use of the drugs. Dr. Macleod (witness No. 23) stated that bronchitis, asthma, and dysentery are caused, but fails to answer the question regarding results of excessive use; and there is every probability that he failed to discriminate between the moderate and excessive use. Surgeon-Major Mullane (witness No. 19), out of nearly 17 years' service, has spent 13 years in the plains districts of the Assam Valley. Regarding effects, he remarked: "Among natives there is a widespread belief that the mortality among ganja consumers from bowel complaints is heavy." He fails to answer the question regarding results of excessive use; and from the nature of his reply quoted it is fair to assume that he has no personal knowledge regarding

effects of either the moderate or excessive use of the drugs. Dr. Partridge (witness No. 22) is an officer of 26 years' service, and stated that he has never seen the evil effects of the drug except in cases under observation for insanity; "the effects apart from that have never attracted my attention."

Three assistant surgeons were examined. Witness No. 25 states: "Moderate use has not, I believe, much to do with bronchitis, dysentery, or asthma." Witness No. 26 considers that "ganja smoking causes asthma and bronchitis," but he does not appear to discriminate between the moderate and excessive use. Witness No. 30 states that the drug "does not cause dysentery, bronchitis, or asthma; rather moderate ganja smoking allays hard breathing in asthma."

Two hospital assistants were examined. Witness No. 27, after stating in his paper that in long standing cases the use of the drug is certain to cause bronchitis, asthma, and dysentery, admitted in his cross-examination: "It is no use my making any statement, because I have no experience of the effects of ganja, and in fact know nothing about it." Witness No. 28 considers that the drug causes bronchitis, asthma, and dysentery; but he fails to answer the question regarding results of excessive use, and it is fair to assume that he has not discriminated between the moderate and excessive use.

Only one native practitioner was examined (witness No. 31), who considered that bronchitis, asthma, and dysentery were caused by the moderate use; but from his written statement it is obvious that he failed to discriminate between the moderate and excessive use.

North-Western Provinces.

502. In the North-Western Provinces nineteen commissioned and two uncovenanted medical officers were examined. Surgeon-Major Tuohy (witness No. 87), of thirteen years' service, stated: "I am unable to answer these questions from personal observation. The consumers of the drugs have assured me that they cause no illeffect s of any kind when taken in moderation. One man only said that bronchitis and asthma were caused." Witnesses No. 75 and 89 stated that no ill effects are induced by the moderate use. Dr. Harding (witness No. 92) in his paper ascribed bronchitis and asthma to the moderate use, but on cross-examination admitted that "the moderate use of these drugs does not in my opinion cause any injury or lead to any baneful results." Surgeon-Captain Roberts (witness No. 91) premises his written statement by remarking that "until this enquiry I knew absolutely nothing about the hemp plant, its use or abuse, save a few grains of information acquired by any student of materia medica in a medical school." Dr. Roberts has had 5½ years' service in India; for one year he toured through towns and villages of the North-Western Provinces and Oudh, and for nearly two years he has acted as a Civil Surgeon, and for the remainder of his service he was in charge of native regiments. Dr. Roberts remarked: "So far as the foregoing opportunities served to impress my powers of observation, absolutely no question of the use, and still less of the abuse, of hemp drugs by the people of India has arisen in my mind prior to this inquiry.....Those who most strongly aver the ill effects of hemp deal (when questioned for definite facts) in generalities, suggesting a dyscrasia, loss of functional power, impotence, chronic rheumatism, pallor, and atrophy, and all these results are precisely what I am led to expect from malarial and splenic cachexia." Surgeon-Major F. C. Chatterji (witness No. 85) has had a lifelong experience of India from Peshawar to Burma.

He stated that no ill effects from the moderate use are known to him. Surgeon-Lieutenant-Colonel B. O'Brien (witness No. 80), of over 20 years' service, stated that no impairment of the constitution is produced; "it gives great relief in dysentery." He added: "In both the Agra and Benares Lunatic Asylums it is thought by the officials that asthma is more prevalent amongst the insane who indulge in ganja. I could find no evidence to substantiate this idea. During my 20 years' attendance at dispensaries in these provinces, I have never met a patient who alleged that he was suffering from the effects of the use, moderate or otherwise, of hemp drugs." Surgeon-Major Cadge (witness No. 81), of over 15 years' service, stated that the habitual moderate use of bhang does not act injuriously in any way any more than the habitual moderate use of alcohol. Surgeon-Major, W. Deane (witness No. 88), of 13 years' service, ten of which have been spent in the North-Western Provinces and one in Burma, has no personal observations regarding ill effects to offer. The greater part of his information has been derived from an assistant surgeon. Surgeon-Lieutenant-Colonel A. J. Wilcocks (witness No. 76), of over 20 years' service, has no personal knowledge of ill effects ensuing from moderate use. "On the contrary, it is an excellent drug in the treatment of dysentery." Surgeon-Lieutenant-Colonel Moriarty (witness No. 79), of over 20 years' service, stated on cross-examination: "I have been led to understand that it was a peculiarity of charas smoking to tend to cause asthma..... I have never personally seen any case of asthma or bronchitis which I could attribute to charas." Witness No. 93 made no attempt to discriminate between the moderate and excessive use of the drugs. Brigade-Surgeon-Lieutenant-Colonel W. R. Hooper (witness No. 74), of 33 years' service, of which 30 years have been spent in civil employ, remarked that no ill effects are induced in a healthy subject by the moderate use of the drugs; but, on the contrary, he considers that in some cases of asthma and chronic bronchitis smoking ganja or charas may be beneficial. Cross-examined as to the basis of his remarks, Dr. Hooper stated: "My remarks about the absence of ill results from the moderate use of the drugs on a healthy subject are based on enquiry made from natives both recently and formerly. I have not seen asthma or bronchitis due to smoking ganja. I have no experience of such smoking as a remedy for these diseases." Surgeon-Captain Morwood (witness No. 90), of 6½ years' service, who has had no opportunity of obtaining information about hemp drugs, stated that ill effects are probably not induced if good food be procurable. "May perhaps cause cough." Surgeon-Lieutenant-Colonel G. Hall (wintess No. 78), of over 20 years' service and large jail experience, considers that no ill effects are caused by moderate use. Surgeon-Captain Weir (witness No. 84) stated that charas and ganja weaken the constitution; bhang does not seem to do so: ganja and charas both cause difficulty in breathing; bhang does not. The witness does not touch upon the effects of excessive use, and may be presumed to have made no distinction between moderation and excess. Surgeon-Captain C. Mactaggart (witness No. 83) stated that in moderate doses it does not appear to have any effect in producing diseases; the witness bases his opinion on what he had learned from prisoners who had been consumers of hemp drugs before coming into jail under his charge. Surgeon-Major E. Mair (witness No. 82) has been in the Jail Department for a number of years, but has had no special opportunities for obtaining information. He stated: "It is a common opinion that smoking ganja or charas is a frequent cause of bronchitis and asthma." The witness does not deal with the results of the excessive use of

the drugs, and may be presumed not to have discriminated. Surgeon-Lieutenant-Colonel Holmes (witness No. 77) is also a Superintendent of a central jail. He stated: "Those who habitually smoke ganja or charas suffer from chest affections; .....said also to cause dysentery, bronchitis, and asthma." The witness does not distinguish between moderate and excessive use; and the basis of his information is "from seeing effects on prisoners and others, and from enquiries made of the various officials and medical subordinates." Surgeon-Major G. Emerson (witness No. 86) has had sixteen years' service, seven of which have been in civil employ. He remarked: "I have never seen dysentery caused by it, but there is no doubt that bronchitis and asthma are to a great extent due to the use of charas and ganja." On cross-examination, the witness said: "My opinion in regard to moderate use of ganja and charas is that evil effects might be produced in certain cases even by moderate use, but as a rule not.....I should not be prepared to attribute to the moderate use of these drugs any further evil effects than to the moderate use of tobacco. I should like to transfer my remarks now to answer No. 46, which deals with the excessive use."

Twenty-four assistant surgeons were examined. Witness No. 109 stated: "I have had to treat a few cases of chronic bronchitis and asthma in which charas smoking was the alleged cause. Charas smokers cough very much." On cross-examination the witness said: "I may say that I did not make enquiry as to whether the bronchitis or asthma was really due to charas, and as a fact people suffering from these complaints often take to charas for relief." Witness No. 105 stated: "Smoking causes bronchitis and asthma, but drinking (bhang) does not, and is beneficial in dysentery." On oral examination the witness stated: "The smoking of ganja and charas caused asthma and bronchitis within my own observation. I have found these diseases very prevalent among those who smoke the drugs to *excess*. The *moderate* use will bring about the same results in time, but I have no personal experience of this. It is not a fact that ganja smoking is a domestic remedy against asthma and bronchitis, but dhatura is so used." The witness then referred to two cases of asthma which he attributes to the drug. "Both these cases began with the moderate use, which developed into the *excessive before the effects* I have described came on. I have no experience of the moderate use causing such serious results, but I think it probable it could if long continued." Witness No. 96 does not mention any diseases as resulting from the moderate use. S. P. Roy (witness No. 120) is an M.B. of the Calcutta University and not in Government employ; he is Municipal Analyst, Allahabad. His evidence is to the following effect: "Cases of chronic bronchitis and bronchial asthma and dysentery are too numerous to be cited. It is a popular notion, and I believe well founded in Bengal, that the habitual ganja smokers suffer from bronchitis and die ultimately from bloody stools." On cross-examination the witness stated: "I have never seen any ganja smokers of long standing who do not suffer from bronchitis and bronchial asthma, and in making this statement I do not confine it to my professional observation. I have not noticed that dysentery is so commonly connected with the hemp drugs. I have heard of ganja being smoked for the relief of asthma, and I have tried the extract of *Cannabis indica* for it without good results." Assistant Surgeon Subhan Ali (witness No. 98) is an M.R.C.S. and L.R.C.P. of London, and stated that ganja and charas cause bronchitis and asthma. Witness No. 103 states: "Ganja and charas very often produce asthma and bronchitis and sometimes dysentery, but one

chillum a day would not do so." Assistant Surgeon Hari Lal (witness No. 104) differentiates between the moderate use of bhang and ganja and charas. Bhang the witness considers does not cause dysentery, bronchitis, or asthma; ganja and charas impair the constitution slowly and cause bronchitis and asthma. Isan Chandar Roy, M.B. (witness No. 127), is a private practitioner. He stated: "In some persons moderate use does not produce noxious effects. But in certain persons, especially those who are predisposed or whose particular organs are already weakened, may have their digestive organs impaired, dysentery, bronchitis, or asthma being produced." Witness No. 107 considers that, provided good food be obtainable, the moderate use does not cause asthma or bronchitis. Witness No. 101 stated that dysentery is not caused, but bronchitis and asthma may result from habitual use of ganja and charas. Witness No. 99 stated that all these diseases are produced. Witness No. 100, on the other hand, made a diametrically opposite statement, *viz.*, that none of these diseases are produced. Manohar Pershad Tewari (witness No. 130) was formerly in Government service, but is now a private practitioner for the last eight years. He considers that the use of any of these drugs, except bhang, does cause dysentery, bronchitis, and asthma. On oral examination, the witness stated: "I have had four or five, or at most ten, patients a year who came before me in my private practice who were in the habit of using intoxicants. Of these, the most, up to eight, are consumers of hemp drugs. The other consumers of hemp drugs referred to were suffering from diarrhœa, dysentery, dyspepsia, bronchitis, asthma, and hæmoptysis. I attributed these to the hemp drugs. These people were all habitual consumers, and they themselves said that they were consumers, and that they could not get enough of the drug, and that made them ill, or they were indulging to excess and had not sufficient nourishment, *i.e.*, rich food, which is required in the case of a consumer. *These are the reasons why I conclude that these diseases were due to the drugs.* In all cases of the above-mentioned diseases, when the consumption of these drugs was discovered, the disease was assigned to these drugs if no other cause—*e.g.*, the prevalence of malarial fever—was discoverable. There were no doubt other consumers of hemp drugs who came before me beyond the average of eight a year, but I cannot say how many, as no enquiry was made about their habit, as it had nothing to do with their disorders." Witness No. 97 considers that while the moderate use of bhang produces no noxious effects, the use of charas and ganja does in the long run. Witness No. 112 stated the drugs do not cause bronchitis, asthma, or dysentery. Assistant Surgeon Man Mohan Das (witness No. 94) has been in Government service for 16 years; he has served in Bengal, Madras, and the North-Western Provinces. He stated that the habitual moderate use of bhang causes no noxious effects. "The moderate use of charas and ganja has some injurious effects..... But the evil effects of charas and ganja appear to be exaggerated. In fact, they are all due to excessive doses of the drugs. There are hundreds among Kahars, Malhas, and other lower classes, and even among the higher classes, who with a habitual moderate dose of charas or ganja keep their health well and live a long life, and it does not affect their moral or mental condition. But it is difficult for a ganja or charas smoker to keep within moderate limits. In most cases, say about three-fourths of the smokers will go to excess, and then all the evil effects will follow." On cross-examination, the witness admitted that his statement regarding three-fourths of the moderate consumers going on to excess was an exaggeration, and said: "I should now say that the proportion of consumers who go to excess is about one-fourth." Witness No. 95 considers that habitual moderate consumers who can afford

nourishing food seldom suffer from any ill effects. Witness No. 111 stated that the habitual use of ganja or charas does not cause bronchitis, asthma, or dysentery, but cures these diseases. Witness No. 106 gave no information of effects induced by the excessive use; with regard to the moderate use, he stated the effects are "not much marked," and that bronchitis and asthma might be caused after long use. Nobin Chandra Mitter (witness No. 148) is a retired assistant surgeon. He stated that during a period extending over thirty years he has treated thousands of persons habitually addicted to the use of the drugs, and has had ample opportunity of observing the effects. He is of opinion that the habitual moderate use, provided good rich food be procurable, does not induce any physical effects for a long time. The ultimate effects of prolonged use of bhang, though moderate, weaken the nervous system and occasionally gives rise to palpitation of the heart. Ganja under the same conditions he has known to have caused bronchitis and dysentery. Witness No. 108 has had over 23 years' experience, and has never seen any noxious effects induced by the moderate use of any of the drugs. Assistant Surgeon Munna Lall (witness No. 123), who has had twenty years' experience, and witnesses Nos. 110 and 102 give similar evidence.

Eight hospital assistants were examined. Jamal Khan, witness No. 113, is one of the old class of vernacular hospital assistants. He considers that daily use of the drugs in moderate quantity induces noxious effects. On oral examination he stated: "Out of one hundred ganja smokers who come sick to the dispensary, I find that seventy-five have chronic bronchitis or dysentery and twenty-five have some mental disorder." Witness No. 121 is described as a pensioner, native doctor, and health officer, Aligarh, and gave evidence to the following effect: "It is not injurious to the constitution otherwise than by causing thinness.....At the time of their use the man suffers from asthma and bronchitis; after leaving their use, he suffers from diarrhœa and dysentery." Witness No. 114 considers that no ill effects are induced. Witness No. 118, a retired hospital assistant, considers "that charas and ganja alone produce bronchitis and asthma, and bhang does not; none produce dysentery." Witness No. 119, another retired hospital assistant, replies to the question in precisely the same language and to the same effect. Witness No. 115 states the drugs do not cause dysentery, but bronchitis and asthma result from continued use. Witnesses Nos. 116 and 117 state that charas and ganja cause bronchitis and asthma; the latter witness states he is not aware whether dysentery is produced or not.

Fifty-two native practitioners were examined, of whom 26 failed to discriminate between the moderate and excessive use of the drugs. Their replies are not further considered. Three gave no reply. Witness No. 122, of over 15 years' experience, considers that no ill effects are induced. Witness No. 124 speaks only of bhang, and considers that it does not injure the constitution; he is silent, however, as to any alleged physical ill effects. Witness No. 125 is a hakim, and considers that ganja and charas produce bronchitis and asthma. Witness No. 126, a private medical practitioner, gives similar evidence. Witness No. 164, a hakim, stated that bhang causes no injury, but the moderate use of ganja and charas causes bronchitis, asthma, and dysentery. Witness No. 165, a hakim, remarked: "Injures soul and body, impairs semen, and impairs digestion no doubt." Witness No. 167, a hakim, considers that use causes dysentery, bronchitis, and asthma. Witness No. 132, a vaid, considers that ganja

and charas produce asthma. Witness No. 134, a private medical practitioner, considers the drugs injurious to the bowels and lungs. On cross-examination he stated: "There would be no harm to speak of if a man continued to be a moderate consumer of ganja or charas. But I think it difficult to keep the habit within bounds." Witness No. 136 stated: "Unless used as a digestive, causes asthma, deafness, and thinness." Witness No. 137 stated that ganja and charas (among other evils) cause "asthma to those who are weak." Bhang has no injurious effects unless taken in great excess. Witness No. 170, a native physician, stated that "habitual consumers do not feel any physical, mental, or moral injury. They neither feel pain nor ever have cough." Witness No. 171 considers that bhang produces no noxious effects, but that ganja and charas cause dysentery, bronchitis, or asthma. Witness No. 172 states that ganja or charas may cause dysentery and asthma; bhang is less harmful. No reply is given to the question dealing with excess which is apparently not distinguished from the moderate use. Witness No. 143 considers that charas and ganja produce "various diseases." Witness No. 146 does not deal with the moderate use. Witness No. 147 considers that bhang and charas are both injurious. "Bhang impairs the appetite in the end and charas causes bronchitis and asthma." Witness No. 173, a hakim of twenty years' experience, replied that "ganja often brings on bronchitis and asthma, and charas produces inflammation of the stomach and liver. None of them, however, has been found to cause dysentery." Witness No. 149 considers that bronchitis and asthma are produced. Witness No. 151 stated that ganja produces bronchitis and asthma, but not dysentery. Witness No. 152 stated that the use of charas and ganja causes cough and asthma. Witness No. 153 stated that ganja and charas give rise to a number of diseases, "especially to complaints of the stomach, lungs, brain, liver, bowels, etc." Witness No. 174 considers that the use of ganja and charas causes bronchitis and asthma. Witness No. 160 stated that, in addition to bronchitis and asthma, dysentery is also caused. Witness No. 158 considers bhang to be harmless, but that charas and ganja cause dysentery, bronchitis, and asthma. Witness No. 159, a vaid, stated that "ganja and charas weaken the heart, dry the constitution, and create lung diseases."

503. In the Punjab, Surgeon-Major J. A. Cunningham, witness No. 35, of over 12 years' service, stated that charas and ganja smoked cause chest affections, but not dysentery. Surgeon-Major Dennys, witness No. 34, stated that "charas smokers, even in moderation, are generally emaciated and in poor health, and are depraved creatures both mentally and physically. This is not the case with moderate consumers of bhang as far as I have been able to gather." The witness does not mention any connection between the use of the drugs and chest affections or dysentery.

Punjab.

Of the assistant surgeon and qualified private practitioner class eight were examined. Witness No. 48 is an L.M.S. and a private practitioner. He stated that "charas and ganja always bring on bronchitis and asthma if very large quantities are smoked. It brings on dysentery also." A perusal of this evidence indicates that the witness has mixed up the effects induced by moderate and excessive use of the drugs. Assistant Surgeon Jai Singh (witness No. 47) considers that the use of the drugs does not seem to cause bronchitis, asthma, or dysentery,

but rather cures them. Witness No. 39, also an assistant surgeon, stated that the use of bhang is probably quite free from noxious effects, but abuse of charas brings on bronchitis and asthma. Assistant Surgeon Rahim Khan (witness No. 37) is Superintendent, Medical School, Lahore, and has had 33 years' residence in the Punjab, and has been connected with the out-patient department, Medical College Hospital, for that period. He stated: "There are no bad after effects from bhang, but even the moderate use of charas brings on chest affections." Cross-examined as to the meaning the witness attached to *moderate*, he replied: "I call ten or twelve *chillums*, costing one or two annas, in the 24 hours moderate use. I know of no more moderate use than that. I know of no case of a man using only one or two *chillums* a day. I would call a man taking one or two annas' worth a day a '*charasi*'." It is clear that this witness knows nothing of the moderate use. Assistant Surgeon Mehr Chand (witness No. 40) stated that the moderate use of bhang produces no noxious effects, while charas, if even used moderately, brings on bronchitis and asthma, general irritation of the respiratory organs, indigestion, and dysentery. On cross-examination the witness said: "As to dysentery, I saw a case of a man who said he was a charas smoker, and took an excessive dose, and it brought on dysentery. I had doubt as to this being the cause. But I think charas may injure the digestion and predispose to diarrhœa or dysentery. I have not enough of cases to be able to say that the drug really produces dysentery. I am not certain. But I have had one or two allegations as to this being the cause, and I had no other cause. I ought to say rather 'it may produce' than 'it does produce dysentery.'" Assistant Surgeon Bhagwan Dass (witness No. 36) is Civil Surgeon of Jhang, and has nearly 25½ years' service. He stated that charas or ganja smoking caused indigestion and diarrhœa and chronic bronchitis. On oral examination the witness stated: "My personal experience of the effects of the drugs is based on my dispensary practice alone. In my social or domestic life I have no knowledge of moderate or excessive consumers..... I have seen five or six cases of chronic bronchitis in people addicted to hemp drugs. I cannot say that it was due to hemp drugs solely. I have also seen several (say about twenty) cases of indigestion and diarrhœa. But here again I cannot say that they were solely due to hemp drugs, but simply that the patients were consumers. These are all the diseases I have seen attributable to hemp drugs. I have never seen a case of dysentery or asthma which I attributed to hemp drugs, though I have seen both in consumers. *My reason for not attributing these diseases to hemp was that other people also suffer from these diseases equally.*" Witness No. 41 did not ascribe any ill effects to bhang, but stated that bronchitis and asthma are often met with in consumers of charas. Witness No. 38 does not discriminate between the moderate and excessive use.

Three hospital assistants were examined. Witness No. 42 considers that charas smoking causes asthma. Witness No. 43 considers that noxious effects are induced by moderate use of the drugs. Hospital Assistant Karm Elahi (witness No. 44), of 25 years' service, considers that moderate use of the drugs to some extent produces noxious effects; and added: "I have not seen a single case of dysentery caused by the practice: of course cases of cough and asthma."

Seven native practitioners were examined, of whom three failed to discriminate between moderate and excessive use. Witness No. 51 stated that charas

causes asthma and bronchitis, but not dysentery. Witness No. 52 stated that "charas, of course, causes loss of appetite and bronchitis and asthma." Witness No. 53 merely stated: "The mischief is done by charas and ganja." Hakim Ghulam Nabi, of Lahore (witness No. 54), of twenty years' experience, stated: "I have not found even a single person during the last twenty years who complained of these drugs. There are more *takias* outside the Mochi Gate, Lahore, than in any other parts of the city which are reserved for the consumption of such drugs; and as the resorters to these *takias* generally come to me for treatment, and as none of them has during the last twenty years complained to me of having suffered from any disease in consequence of using bhang or charas, it shows that the moderate use of these drugs is harmless."

Central Provinces.

504. In the Central Provinces three commissioned officers, one Honorary Surgeon-Major, and two senior apothecaries were examined. All these officers are of long service and considerable experience. One, an officer of forty years' service, did not discriminate between the effects induced by moderate and excessive use of the drugs, and his replies to questions dealing with the moderate use are consequently valueless. One witness stated that the moderate use of ganja and bhang does not ordinarily produce any noxious effects, but that ganja sometimes causes chronic catarrh. A second witness stated that no evil effects are induced; then added that bronchitis and asthma may be caused by ganja smoking, but not dysentery. Surgeon-Major Quayle (witness No. 37), who had resided four years in a district where the drug is extensively cultivated, and where it is easily procurable in the adjoining Native States, alleged that he had no evidence that the moderate use of the drug produces any noxious effects—physical, mental, or moral. Surgeon-Lieutenant-Colonel McKay (witness No. 36), after twenty years' service in the country, gives no reply to the Commission's questions dealing with the effects of moderate or excessive use of the drugs. Brigade-Surgeon-Lieutenant-Colonel Gaffney, after 25 years' service as a Civil Surgeon in the Central Provinces, stated: "I do not think the moderate use produces any of these ill effects."

One assistant surgeon was examined in the Central Provinces, a man of 22 years' service, who was of opinion that, while the moderate use of bhang would not cause bronchitis, dysentery, or asthma, these remote effects might be induced by ganja.

One hospital assistant who was examined stated on cross-examination: "I have never seen an asthma, bronchitis, or dysentery case arising from ganja." Another pensioned hospital assistant was of opinion that the moderate use of ganja, charas, and bhang does produce noxious physical, mental, and moral effects; ganja causing dysentery, bronchitis, and asthma; bhang making a person unusually fat, affecting the urinary system, and causing bronchocele and hydrocele. One *vaid* was examined, 55 years of age, who had known hundreds of ganja smokers, and had never known a case in which it did any harm. He had himself been a steady ganja smoker for thirty years, consuming six to eight *chillums* daily.

Madras.

505. In Madras twenty commissioned and uncovenanted officers, of whom eleven either failed to reply or did not discriminate between the effects of moderate and excessive use, were examined. Surgeon-Major King (witness No. 85), nineteen years' service, sixteen

of which have been spent in civil employ, stated that in the habitual moderate smoker bronchitis is frequent. Cross-examined as to the basis of his observation of the general effects induced by the drugs, he stated: "I have known the moderate use in cases of sepoys and one private servant.....Besides the above direct observations, I have derived general impressions.....My general impression is based upon the fact that persons alleged to have been ganja smokers have presented these characteristics, but I have not specially inquired into the truth of the allegation that they were ganja smokers. They were pointed out as notorious ganja smokers. I did not discriminate in these cases between the moderate and excessive use because I was not called upon to do so." Surgeon-Major O'Hara (witness No. 93) stated that apparently no ill effects are caused, and that he has no information regarding specific affections alleged to be induced by the drugs. Surgeon-Major Sturmer (witness No. 99), of nearly nineteen years' service, said regarding effects of moderate use: "In time, I believe, it leads to mental and moral degradation." Cross-examined as to the basis of his information, the witness said: "I have never been into the question of ganja. I have never seen it scarcely. My first sentence (the one quoted above) is based on what a ganja smoker said. He said: 'It is a bad thing. I should like to leave it off, but I cannot.' I have really no experience as to the effects of either moderate or excessive use." Surgeon-Major W. F. Thomas (witness No. 96), of fifteen years' service, only three of which have been passed in civil employ, stated that users of the drugs suffer from dysentery, bronchitis, and asthma. On cross-examination the witness said: "I had to treat three cases of ganja poisoning. These men drank liquor and indulged in ganja. In all these cases there was congestion of the lungs present.....These are the only three cases in which the evil effects of the drug have come directly under my notice. The symptoms in all three cases were the same, and for that reason I concluded the pulmonary affection to be the result of the drug. I have learnt from enquiry from medical subordinates and people in villages that dysentery, bronchitis, and asthma result from the drug. I have no personal experience on the point." Surgeon-Lieutenant-Colonel Hyde (witness No. 86) stated that, so far as he knew, no ill effects were caused. Surgeon-Major Lancaster (witness No. 90), twenty years' service, nineteen of which have been passed in civil employ, in his oral examination said: "I have had no opportunity of noticing the effects of the moderate use of hemp drugs; they have not come before me." Surgeon-Major Pemberton (witness No. 98), of fifteen years' service, and in civil employ continuously since 1885, stated that evil effects are induced, but asthma is relieved, and bronchitis and dysentery are not caused. Surgeon-Major N. Chattarji (witness No. 88), of nearly seventeen years' service, nearly all in military employ, stated: "It does not produce any particular disease except a peculiar cough, the result of a kind of chronic bronchial catarrh." On cross-examination the witness said: "I cannot in the case of any sepoy attribute thinness or cough to ganja, for I cannot be certain. I have no proof..... What I have said in my written answer about thinness and cough is my impression; but I could not assert it about any particular case." Civil Apothecary A. Wells (witness No. 105) has about nine years' service. He stated that bronchitis, asthma, and dysentery are not caused by the drugs, but relieved by them. Dr. K. J. Naidu (witness No. 106) stated that no ill effects are caused. Surgeon-Captain C. Fearnside (witness No. 97) considers that the drugs "impair the constitution, causing weakness of the limbs and other tissues, and hence the drug has

to be taken to keep up the tone of these tissues. It causes indigestion in many." No information is given about any specific affections being induced. Surgeon-Major-General DeFabeck (witness No. 83) was Surgeon-General with the Government of Madras. He had served in Madras and Burma since 1857. On oral examination the witness stated: "My experience is that it is a very rare thing to meet with any case in which the hemp drug has caused evil effects on the health of the population. Apart from insanity, no evil effects have been brought to my notice."

Seven apothecaries and private practitioners were examined. Civil Apothecary T. M. Cheriyan (witness No. 100), of nine years' service, stated: "It causes bronchitis and asthma"; and he also referred to other evil effects. On cross-examination the witness said regarding effects: "All the statements made here are based exclusively on hearsay. *I have not seen any of these ill effects myself in my practice*.....I do not know of any case of illness that has come before me of any kind being due to hemp drugs." Civil Apothecary K. Vasudeva Rao (witness No. 101), of six years' service, stated, under the question relating to effects, that he was once called to see a bairagi who was a habitual smoker of opium and ganja, and that he was a ghostly skeleton of bones covered with skin. No other physical effects are mentioned. On oral examination the witness said: "I did not treat the bairagi; I only saw him once; and, apart from his own statement that he was an habitual smoker of opium and ganja, I learnt nothing whatever of his history. I cannot, therefore, judge whether his condition was due to other causes than the habits he confessed to." Civil Apothecary Mohammad Asadulla (witness No. 104) stated that the drugs caused bronchitis and other evil effects. Cross-examined, he said that he had "treated cases of asthma, bronchitis, and the like which have resulted from prolonged use of the drugs, but he could not recall any such cases." Civil Apothecary G. A. Vellones (witness No. 102) gave a negative reply regarding causation of specific diseases. Assistant Surgeon Saldana (witness No. 107) stated that "consumers say no noxious effects are produced so long as sufficient food is supplied." Civil Apothecary N. H. Daniel (witness No. 103) considered that evil effects were induced, including dysentery and bronchitis.

Thirteen hospital assistants were examined. Witness No. 119, a pensioned hospital assistant, considers that the habitual moderate use never produces any bad effects, or causes dysentery, bronchitis, or asthma. Witnesses Nos. 108 and 109 also gave a reply in the negative regarding specific diseases. Witness No. 111, of 22 years' experience, considers that the habitual consumer generally exceeds moderation; no specific diseases are mentioned as being caused by moderate use. Witness No. 113 stated that, while bhang does not produce any noxious evil effects, smoking ganja does. Witness No. 114 stated: "It produces noxious effects." Witness No. 115, of thirteen years' service, on the other hand, stated: "I have not observed any noxious effects." Witness No. 116, of fourteen years' service, considers that, with the exception of a "kind of hoarse cough in ganja smokers," no noxious effects are produced by the use of bhang or ganja. The remaining witnesses either failed to reply or were not examined on the effects induced by moderate use.

Six native practitioners were examined. Witnesses Nos. 121 and 123 stated that the habitual moderate use of ganja or bhang does not produce any noxious

effects. Witness No. 135 stated: "It impairs the constitution by making the man lean; increases digestion, and removes dysentery and cough." Witness No. 124 stated: "The use of these drugs produces moral effects, physical and mental, only to those people who are accustomed to it, and not in any way distinctive." No. 125 stated: "No doubt it produces noxious effects. In the long run they were subjected to bronchitis, and their eyes became dark gradually." This witness fails to answer the question dealing with excessive use, and has not apparently discriminated between the two uses of the drug. The remaining witnesses failed to reply.

Bombay.

506. Thirteen commissioned medical officers were examined in Bombay, of whom three were examined only regarding asylum procedure in relation to insanity. Of the remaining ten, Surgeon-Lieutenant-Colonel McConaghy (witness No. 69) is an officer of nearly 25 years' service, fifteen of which have been passed in the Civil Department. He stated that the moderate use of bhang or ganja does not impair the constitution in any way. Surgeon-Major Kirtikar (witness No. 73) has served over sixteen years, eleven of which have been in civil employ. He stated: "I have not seen nor have I heard from any reliable source of dysentery, asthma, or bronchitis being traced to the use of hemp in moderation. European physicians use it for the *cure* of dysentery." Surgeon-Major Boyd (witness No. 67), of about seventeen years' service, of which three-and-a-half years have been in military employ, stated: "Neither have I known any cases where it caused dysentery, bronchitis, and asthma." Surgeon-Major Parakh (witness No. 66) does not refer to specific diseases being induced. In his paper he refers to "homicidal insanity" being due to the moderate use, but in his oral examination he stated that probably he had in mind cases due to excessive use, and his reply should be taken as referring to the *excessive use*. Surgeon-Lieutenant-Colonel Bartholomeusz (witness No. 68), of over twenty years' service, stated: "I have not seen a sufficient number of cases to enable me to give a definite opinion;" and he does not deal with excessive use. Brigade-Surgeon-Lieutenant-Colonel J. Arnott (witness No. 65), of about twenty-five years' service, replies to the question dealing with effects of moderate use by entering the word "yes" four times without explanation; and he does not answer the question which treats of excessive use. Brigade-Surgeon-Lieutenant-Colonel G. A. Maconachie (witness No. 64), of about twenty-five years' service, stated that he knows nothing about the subject. Surgeon-Colonel D. Hughes (witness No. 74), of twenty-seven years' service, of which fourteen were in military employ, is Principal Medical Officer in Bombay, Deesa and Aden districts. He stated: "I think the smoking of charas causes asthma and bronchitis, as I well remember cases of these diseases in the 24th Bombay Infantry which were ascribed by the hospital assistant and the men's comrades to charas smoking, and which recovered in hospital quicker than cases due to ordinary causes." On cross-examination the witness said: "I remember that when the yearly inspection for pension took place..... a number of men, of service only just long enough to earn pension, came up suffering from bronchitis and asthma. They were generally weak and broken down in appearance, but this may have been caused by voluntary starvation..... It was explained to me that they owed this illness to charas smoking. I did not certify in any case that the illness of a man who was granted pension was due to charas. I am bound to state that an applicant's disease was not aggravated by vice or intemperance, but I took no notice of the use of the drug in

any of these cases, because I did not attach sufficient importance to the statements made to me, and was not sure that they were correct." This evidence, rejected at the time, is the only basis of the opinion now expressed. Surgeon-Major-General Turnbull (witness No. 63), of 33 years' service, Surgeon-General with the Government of Bombay, stated: "I have no personal experience of the effects of the hemp drugs on the people." Surgeon-Major D. C. Davidson (witness No. 71) stated: "So far as I can learn, the moderate use of ganja in smoking does not appear to be either physically or mentally injurious, generally speaking."

Eleven officers belonging to the assistant surgeon and qualified private practitioner class were examined. Witness No. 76 stated: "I think it does not cause dysentery, bronchitis, or asthma." Witness No. 90 stated: "It does produce dry cough eventuating in bronchitis or asthma, but it does not seem to produce dysentery, so far as my experience goes." Witness No. 91 gives a negative reply to ill effects being caused by moderate use. Witness No. 79 stated: "I have not noticed any other disease to result from occasional or moderate use of ganja or bhang in any form." The disease referred to was *general atrophy*, and death from the use of majum. Witness No. 77 stated that no ill effects are produced. Witness No. 78 stated that he has had no opportunity for observing effects. Witness No. 82 stated that injurious effects are produced. "It is a popular belief amongst the ganja smokers that a long-continued habit produces diarrhœa and dysentery, unless these evils are counteracted by an abundant supply of wholesome food, with especially a liberal allowance of ghee and other oleaginous materials. My experience supports the above made statement." Witness No. 80 stated that no ill effects are produced. Witness No. 81 stated that the use does not cause bronchitis or dysentery. Witness No. 97 stated: "It causes dysentery and other derangements of the bowels;" but the witness fails to discriminate between the effects of the moderate and excessive use. Ismail Jan Mahomed, L.M.S., (witness No. 96), stated: "Many cases of chronic diarrhœa and dysentery, as well as chronic bronchitis and asthma, are seen in those who use ganja." The witness, however, does not answer the question dealing with results of excessive use, and does not discriminate between the two uses of the drug.

Seven witnesses of the hospital assistant class were examined. Witness No. 83, of nearly 30 years' standing, stated: "I have not sufficient information to answer this question." Witness No. 84 does not discriminate between the moderate and excessive use of the drugs. Witness No. 85 stated: "I do not think that habitual moderate use of any of these drugs produces any noxious effects." Hospital Assistant Sudashio Waman (No. 86), of twelve years' service, stated that the habitual moderate use of the drug in certain constitutions produces noxious effects, causes bronchitis and asthma, but not dysentery. On cross-examination the witness stated: "The constitutions affected injuriously by the moderate use of hemp drugs are nervous and weak constitutions. In small quantities the drugs would do no harm to a healthy person." Witness No. 87 stated that ganja causes bronchitis and occasionally asthma. Witness No. 88 stated that no ill effects are caused. Hospital Assistant Purson Singh (witness No. 89) has had nearly 25 years' service in the Medical Department. He stated: "It causes chronic bronchitis and asthma, but cures dysentery."

Eight witnesses of the unqualified native practitioner class were examined. Witness No. 111 is a druggist and chemist, and stated that no ill effects are

produced. Witnesses Nos. 98 and 99, vaidyas, gave similar evidence to the last witness. Witness No. 100, also a vaidya, stated no ill effects are caused by the moderate use of bhang; but he does not express any opinion on the effects caused by moderate use of ganja. Witness No. 92 is described as a medical practitioner of 27 years' experience, and does not think that noxious effects are produced. Witness No. 93, also a medical practitioner, stated: "They do not cause dysentery, bronchitis, or asthma, but, on the contrary, do good to these diseases." Witness No. 94 does not reply. Witness No. 95, also a medical practitioner, stated: "I have not met with any cases in which the habitual moderate use of bhang has produced any noxious effects, ... but I believe the habitual moderate use of ganja and charas does produce some noxious effect physically, mentally, and morally."

507. Three commissioned officers were examined in Sind. Brigade-Surgeon-Lieutenant-Colonel J. F. Keith (witness No. 16) has had twenty-five years' service, of which 14 have been passed in Sind and 15½ in civil employ. He stated that a general negative may be given to the questions dealing with noxious effects from moderate use. Surgeon-Major Corkery (witness No. 17) stated that the moderate use of these drugs does not produce any immediate noxious effects; but if bhang is indulged in for a considerable period, it impairs the constitution and produces emaciation. "At first it acts as a digestive, but afterwards impairs it, giving rise to asthma and bronchitis, but not dysentery." Brigade-Surgeon-Lieutenant-Colonel Bainbridge (witness No. 15) has acted as Civil Surgeon for 26 years. He stated: "I have no evidence, but I should say that the habitual moderate use of any of these drugs is harmful."

Sind.

Four officers of the assistant surgeon class and one medical officer of health were examined. Witness No. 1 stated that no ill effects are produced. Dr. S. M. Kaka (witness No. 24) is medical officer of health at Karachi, and has practised there since 1884. The witness stated: "The habitual moderate use of ganja and charas acts injuriously upon the constitution physically, mentally, and morally." In cross-examination he stated: "It is difficult to draw a definite line between moderate and excessive use. They merge into one another." Witness No. 19 stated: "I am of opinion that moderate use of *subzi* does not produce any noxious effects—physical, mental, or moral." And Surgeon J. E. Bocarro (witness No. 20) stated: "I cannot say this of bhang, but charas and ganja, even in moderate doses, tend to weaken the bodily frame..... As regards causing the diseases mentioned, I have not a single case on record to warrant such a conclusion so far as bhang is concerned, but several of my cases indicate that the continued use of charas and ganja do cause dysentery and bronchitis. I have no history regarding asthma." Witness No. 21 stated that the habitual moderate use of the drugs does not cause dysentery, bronchitis, or asthma.

In Sind two hospital assistants and no private practitioners were examined. Witness No. 22 stated no ill effects are caused. Witness No. 23 stated that the use "causes bronchitis and shortness of breath."

508. Eight commissioned officers were examined in Burma. Surgeon-Major Thomas (witness No. 42) stated that no ill effects were produced by moderate doses. Surgeon-Major Dantra (witness No. 40) has had 17 years' service, nearly the whole in Burma, and

Burma.

stated: "It neither causes dysentery nor asthma, but it produces cough." Surgeon-Major P. W. Dalzell (witness No. 41) stated: "I am not aware that it causes *either dysentery, bronchitis, or asthma.*" Surgeon-Lieutenant-Colonel Mukerji (witness No. 39) has 26 years' service, and stated: "I have seen several habitual moderate smokers who did not suffer at all either physically, mentally, or morally. Others have injured their constitutions by use of ganja and charas." Surgeon-Captain Castor (witness No. 44) stated: "Not so far as I know. Causes loss of appetite." The remaining witnesses do not reply to the question.

Three assistant surgeons were examined. Witness No. 46 stated: "Habitual moderate use has apparently no noxious effect." Assistant Surgeon Moonshi (witness No. 45) has 21 years' service, and stated: "I have known habitual moderate consumers of these drugs to enjoy robust health." According to the witness, the drugs do not cause bronchitis, asthma, or dysentery; "on the contrary, asthmatic people often resort to it to allay their sufferings. Immoderate use causes gastro-intestinal irritation." The third witness was not examined regarding effects of moderate use.

One hospital assistant was examined (witness No. 48), who stated: "The moderate use does not cause dysentery and bronchitis." No private practitioners were examined.

509. Five commissioned and two uncovenanted officers were examined in the smaller provinces, six in Berar, and one in Ajmere. Surgeon-Major Swain (witness No. 18) has had 17 years' service. He stated: "It does not cause dysentery, diarrhœa, bronchitis, or asthma." Surgeon-Major Roe (witness No. 19) stated: "It is said to cause bronchitis and asthma, but not dysentery." Dr. O. W. Jones (witness No. 21) stated: "The moderate use of ganja or bhang is in no way detrimental to the consumers; on the contrary, it is beneficial. I give this as my experience and as the experience of men who are in the habit of using ganja in moderation for periods varying from 10 to 12 years." Surgeon-Captain Morrison (witness No. 22) stated: "Eventually evil effects are caused. Ganja smoking has caused asthma." Dr. W. T. Montgomery (witness No. 23) stated that "even the habitual moderate use of these drugs affects the physique, mind, and morals of the consumer." The witness does not reply to the question dealing with effects of excessive use, and has probably really not discriminated between the two uses of the drugs. The Ajmere witness does not reply.

Berar, etc.

Two officers of the assistant surgeon class were examined. One stated (witness No. 30) that the constitution is weakened and debilitated, and that smoking produces cough and asthma in some cases. The other witness does not reply.

Four officers of the hospital assistant class were examined. Witness No. 27 stated: "Yes; it does to some extent produce noxious effects, the excessive use causing bronchitis, asthma, and dysentery." Witness No. 28 stated it produces bronchitis. Witness No. 24 stated that first no ill effects are caused, but gradually the dose has to be increased, with the result that "dysentery, bronchitis, rheumatism, loss of memory, epistaxis, softening of brain, etc., set in, and the person becomes so sick that he finds his life a burden".....Witness No. 25 stated: "Chronic bronchitis is caused by ganja smoking. I have not seen dysentery or asthma result from ganja or bhang."

Summary of the evidence.

510. The medical evidence which has thus been analysed very clearly indicates in the opinion of the Commission that when the basis of the opinions as to the alleged evil effects of the moderate use of the drugs is subjected to careful examination, the grounds on which the allegations are founded prove to be in the highest degree defective. A large number of medical witnesses of all classes ascribe dysentery, bronchitis, and asthma to the moderate use of the drugs. An equally representative number give a diametrically opposite opinion. The most striking feature of the medical evidence is perhaps the large number of practitioners of long experience who have seen no evidence of any connection between hemp drugs and disease, and when witnesses who speak to these ill effects from the moderate use are cross-examined, it is found that (*a*) their opinions are based on popular ideas on the subject; (*b*) they have not discriminated between the effects of moderate and excessive use of the drugs; (*c*) they have accepted the diseases as being induced by hemp drugs because the patients confessed to the habit; and (*d*) the fact has been overlooked that the smoking of hemp drugs is recognized as a remedial agent in asthma and bronchitis. A few witnesses incidentally refer to personal idiosyncrasy as perhaps being a factor in rendering some consumers of the drugs less tolerant and more liable to be affected by them even when used in moderate quantity. This view the Commission are prepared to accept; but for the vast majority of consumers, the Commission consider that the evidence shows the moderate use of ganja or charas not to be appreciably harmful, while in the case of moderate bhang drinking the evidence shows the habit to be quite harmless. As in long-continued and excessive cigarette smoking considerable bronchial irritation and chronic catarrhal laryngitis may be induced, so, too, may a similar condition be caused by excessive ganja or charas smoking; and to the œtiology of bronchial catarrh and asthma in ganja smokers the Commission have already referred. The direct connection alleged between dysentery and the use of hemp drugs the Commission consider to be wholly without any foundation. In the case of bhang there is nothing in the physiological action of the drug which could in any way set up an acute inflammation of the large intestine resulting in ulceration. On the contrary, it is well known that hemp resin is a valuable remedial agent in dysentery. As regards ganja or charas smoking inducing dysentery, even assuming that the products of the destructive distillation of the drugs directly reached the intestines, there is evidence that those products, when condensed and injected into a cat's stomach, failed to induce any inflammatory process. The connection, therefore, between hemp drug smoking and dysentery appears even remoter than in the case of bhang drinking and that disease, and cannot be accepted by any stretch of the imagination as even a possible direct cause of dysentery.

General effects of excessive use.

511. Hitherto the Commission have only considered the *direct* action of hemp drugs when used in moderation in inducing certain marked conditions, but their *indirect* action when taken in excess must also be briefly considered. First, as regards the indirect action of bhang in inducing bronchitis, Dr. Prain may be quoted. He writes: "Here as in so much else associated with hemp some misunderstanding has arisen among Natives and Europeans alike, and it has been supposed that the use of hemp causes the bronchitis. As a matter of fact, cases of this 'bronchitis' cold weather cough would seem to be rather less common among

siddhi tipplers than among other people of the same class. What does happen is that digestion is impaired, the daily consumption of such a dose of narcotic overburdens the alimentary and eliminating systems, the man's appetite goes, and the food he takes is not properly absorbed. The symptoms mentioned are the signs of this indigestion, and the impaired vitality which renders the system unable to throw off an illness is its results." With lowered vitality due to any cause, it must be obvious that an individual is more liable to be affected by vicissitudes of weather and bad sanitary surroundings than a person in normal health; and it may be accepted that excessive consumption of any intoxicant does tend to lower vitality. Excessive consumers of the drug are therefore probably more liable to bowel-affections. As regards the indirect effects of the drug when smoked, it is likely that the excessive consumers also commit excesses of other kinds, while the excessive smoking also tends to diminish the appetite: the money which should be spent for the purpose of procuring wholesome and nutritious food—which a large number of witnesses state to be essential if evil effects are to be warded off—is used for obtaining the drugs. It is not surprising that under such conditions the excessive consumer should be more liable to bowel-affections, diarrhœa, or dysentery than a non-consumer.

A few witnesses have referred to sudden death following a prolonged pull at a ganja or charas *chillum*. In the cases which the Commission have attempted to sift, the cause of death has not been satisfactorily explained. There are, however, diseased conditions in which sudden death is not uncommon, and in the cases referred to autopsies do not appear to have been conducted. The Commission consider, however, that a very prolonged pull at a *chillum* might possibly cause spasm of the glottis, producing asphyxia, or the products of the destructive distillation of the resin might cause paralysis of the respiratory centre or of the heart. Alleged cases of this kind are very few indeed, and they have not been carefully examined. They need not detain the Commission further. Leaving the physical effects, the Commission now proceed to discuss the mental effects of the drugs as shown in the alleged causation of insanity.

CHAPTER XII.

EFFECTS—MENTAL.

Insanity.

512. The Commission have attached considerable importance to the inquiry regarding the connection between insanity and hemp drugs because this is the part of the subject of which most has been heard in the past. There has been undoubtedly a popular impression that hemp drugs do cause insanity. There are not a few witnesses who deny this,—who say that they have never seen a consumer of the drugs insane, and do not believe that the drugs ever produce insanity. But the much more common impression is that, at all events if used to excess, the hemp drugs may, and often do, produce insanity. Some few witnesses, generalising from a most limited experience, go so far as to say that insanity is the inevitable result of the use of the drugs. There exists undoubtedly a popular impression which has come down from many generations that there is some connection between hemp drugs and insanity. Besides this popular impression, there has been great prominence given to asylum statistics as affording some tangible ground for judging of the effects of hemp drugs. Over and over again the statistics of Indian asylums have been referred to in official documents or scientific treatises not only in this country, but also in other countries where the use of these drugs has demanded attention. Other alleged effects of the drugs have attracted but little attention compared with their alleged connection with insanity.

Popular impression.

513. The popular impression on the subject is capable of very simple explanation. It is undoubtedly a very difficult matter to decide as to the cause of insanity in any case. And it cannot be expected that the popular view of the cause in any particular case should be accepted as accurate. There may be good ground for the popular opinion that insanity is caused by hemp drugs. That question may be deferred for the present. But there can be no doubt that in any particular case this view of causation must be accepted with caution. To ascertain the true cause requires a thorough knowledge of the history of the patient and a scientific capacity for judging of that history. The unscientific or popular mind rushes at conclusions, and naturally seizes on that fact of the case that lies most on the surface. Any exciting cause is more easily apparent to the casual and unscientific observer than a predisposing cause could be. The former is nearer to the effect in point of time, and is naturally more readily associated with it. Similarly, any physical cause is more easily apparent to such an observer than a moral cause would be. The former lies nearer the surface, and any physical fact that seems a possible cause is naturally accepted. Again, an intoxicant would naturally be more readily accepted than other physical causes, because some of its effects as seen in ordinary life are very similar to the symptoms of insanity. This is, perhaps, specially the case with ganja: an excessive dose produces intoxication. Its first effect is the "disequilibration of the intellect," and the mental symptoms of hemp drug intoxication are very similar to those of insanity. Such physical symptoms as the casual observer would note are less marked perhaps in the case of ganja than with alcohol, while the mental condition is often that strange mixture of apparent clearness with manifest derangement of thought which is found in insanity, but not usually in alcoholic intoxication. It is only natural that drugs the intoxication of

which is seen to produce such symptoms should be readily accepted by the popular mind as a cause of insanity.

This popular idea has been greatly strengthened by the attitude taken up by Asylum Superintendents. They have known nothing of the effects of the drugs at all, though the consumption is so extensive, except that cases of insanity have been brought to them attributed with apparent authority to hemp drugs. They have generalised from this limited and one-sided experience. They have concluded that hemp drugs produce insanity in every case, or in the great majority of the cases, of consumption. They have had no idea that in the vast majority of cases this result does not follow the use. They have accordingly without sufficient inquiry assisted by the statistics they have supplied and by the opinions they have expressed in stereotyping the popular opinion and giving it authority and permanence. All this mass of popular and medical opinion demanded careful examination. The Commission have set themselves to take evidence from lay witnesses and to sift as far as possible the cases mentioned so as to ascertain the basis of the popular view. They have also examined medical men of all classes as to cases of the alleged connection between hemp drugs and insanity which have come before them in their practice, and have cross-examined them carefully in regard to these cases so as to see whether the grounds for the opinion formed in each case are adequate. Finally, they have very carefully considered the asylum statistics, and specially enquired into a large number of asylum cases. It has become apparent in the course of the inquiry that no satisfactory conclusion can be based on the individual cases reported by witnesses. As a rule, it is made manifest at once by cross-examination that the history of the patient has not formed the subject of careful inquiry; that the opinion is based on most inadequate data; and that little or no importance has been attached to the question of causation. The Commission have therefore been compelled to fall back on the asylums. This course seems clearly expedient on two grounds—firstly, that the asylum statistics and asylum experience have formed the principal basis of the opinion which calls for examination; and, secondly, that the asylum cases must form the best material for arriving at a conclusion. In its general effects the evidence of witnesses should not be ignored; but it is impossible to say precisely what weight ought to be attached to it in regard to particular facts; and the main basis of any final conclusion must be the material supplied by the asylums which the Commission now go on to consider.

Difficulty of getting accurate information.

514. The facilities which exist in England for acquiring something like accurate knowledge of the cause of insanity in any particular case may be confidently regarded as much greater than those in India. Yet every work on insanity contains comments on the difficulty of arriving at the truth and the unsatisfactory nature of many of the statements recorded. The most important subject of inquiry in this connection is the history of the lunatic's family, so as to discover what (if any) hereditary predisposition to insanity there may exist. Regarding this, Dr. Blandford says ("Insanity and its Treatment"): "Statistics on this subject are valueless. One author attributes 10 per cent. of cases to this cause; another no less than 90. This arises from lack of information on the part of some friends and the wilful concealment of others, and also because some statisticians seek for insanity only, taking no account of other neuroses, such as epilepsy

or paralysis. If we make the attempt, we shall soon find how difficult it is to get an accurate account of the health of the father or mother and grandfather and grandmother of any one patient." On the wider subject of causation generally, Dr. Hack Tuke (Dictionary of Psychological Medicine; article "Statistics of Insanity") says: "As the Lunacy Commissioners adopt a classification of the causes of insanity which is fairly workable, and have collected together a large number of returns from English asylums, it is desirable to give the results here for what they are worth. As is well known, the entries made by the friends of patients in the statutory statement are extremely unreliable, and constantly confound cause and effect. The Commissioners state that they have not relied upon these, but upon statements verified by the medical officers of the asylum."

Asylum statistics.

515. If this be the case in England, how much more is it necessary in India to exercise caution in receiving statistics as to the causes of insanity, to examine carefully the source from which they come, and to rely only on those which have been carefully tested. The Commission in examining the statistics of the lunatic asylums soon found that they could not be regarded as trustworthy. They first of all enquired into a number of cases in the Dullunda Asylum (Calcutta), and ascertained generally the practice in regard to recording the cause in the asylum registers, and the character of the inquiry on which that record was based. What they learned there led them to distrust the asylum statistics. They determined to make a careful inquiry into all cases attributed to hemp drugs in one year, and to endeavour thus to ascertain how far the statistics were reasonably correct, and, if possible, also to arrive at some conclusion as to whether hemp drugs have any real connection with insanity. They fixed on the year 1892. They considered it for obvious reasons expedient to take the same year all over India; and this was the last year for which complete statistics existed when they began their inquiry. At the same time these statistics had been completed and printed before the proposal to have any inquiry into the effects of ganja had been made. The Commission decided to take up each of these cases of 1892 separately, and to inquire as fully as possible into its history.

Hitherto any opinion regarding the connection between hemp drugs and insanity which has professed to have any solid basis at all, or to be more than a vague impression, has been based on the figures contained in the annual Statement No. VII appended to the Asylum Reports. It is necessary to consider how far these figures supply any reasonable basis for a scientific opinion on the question.

The figures contained in that statement are compiled from the entries as to cause made in the asylum registers. The great majority of the Superintendents of Asylums have clearly stated that these entries are based on the descriptive rolls sent with the lunatics. They have not considered it necessary to enquire how far the descriptive rolls are likely to give trustworthy information regarding cause, how or by what agency that information is collected, or by whom it is supplied. It has been sufficient that it is sent to them officially, and that they have no opportunities of testing it. They have therefore accepted it. If the papers have been manifestly incomplete, they have been sent back to the Magistrate for completion. The practically universal rule has been to

accept the cause entered in the descriptive roll, and only to make enquiries in the asylum when no cause had been entered. It cannot be said that even this practice has been carefully and accurately observed. The copying of the entries is left to subordinates who sometimes use their own discretion. Thus Dr. McConaghy, Superintendent of the Poona Asylum, says: "The register is filled up by the assistant at the time of the lunatic's admission. According to my idea of asylum practice, the entries must be in accordance with Form C. If the cause is entered as unknown, it must be so shown in the register. No alteration would be made without the permission of the Magistrate." Yet of the six cases ascribed to hemp drugs in 1892, there was not one in respect to which the entry in the register corresponded with that of the descriptive roll as to cause, and there was nothing on record to explain the discrepancy in any case. Similarly, Dr. Macnamara, Superintendent of the Tezpur Asylum, says: "The cause is entered in the general register from the police statement, *i.e.*, from the descriptive roll. We have nothing whatever to do with it. It is entered by the Overseer in charge of the Asylum, and ought to correspond with the entry of the descriptive roll." As a matter of fact, eleven of the thirteen cases for 1892 showed entries regarding cause which did not correspond with the descriptive rolls; and of these 11, no less than 10 were made, not by the Overseer, but by his subordinate, the jemadar. Besides such errors as these, there are errors arising from carelessness in the mere copying of the register entries from year to year. These derive their importance from the fact that they must have been discovered had any attention been really given in the asylums to this matter of causation. A striking example may be given from among the old cases in the Rangoon Asylum. Moung Min Thay was admitted on 25th June 1871. There has been no improvement in his mental state. There are no papers in his case except an order from the Magistrate to receive the man "supposed to be insane." The original entry in the case book shows cause as "predisposing disease of the brain, exciting drinks, and smokes opium;" and it shows the duration as "probably from birth." It also shows that the man was epileptic. There is no mention of ganja. The register for 1885 (the first to show causation) shows "alleged duration" as "congenital," and "alleged cause" as "drink and opium smoking." The entry "congenital" is continued until 1892, when it is replaced by a "*Do.*" under the "Not given" of a previous case. In 1886 the "cause" similarly undergoes undesigned alteration. The word "drink" is replaced by "ganja;" and in 1888 the reference to "opium" is finally dropped. The case thus became a ganja case, and has been shown as such ever since. These all may be instances of exceptional carelessness, but as a general rule it cannot be said that these entries have been made with care. Superintendents have not attached much importance to them. It has been left to subordinates to do this work; and that work as a rule has not been carefully supervised. Speaking generally, however, Superintendents have desired that the entries in the register regarding cause should correspond with those in the descriptive rolls; and they have believed that their subordinates were making the entries on this principle.

Some few Superintendents have professed a different method, and have assumed some responsibility for the entries as to the cause of insanity in their registers. There are, however, only three Superintendents who held this office in 1892 who profess to have been to any appreciable extent independent of the

police statements or descriptive rolls. The first of these is Brigade-Surgeon-Lieutenant-Colonel Hooper, who says that his "practice has not been to enter the cause at once, but to wait until a diagnosis of the case has been made. Then, if the supposed cause, as shown in the Magistrate's statement, is not inconsistent with the diagnosis of the insanity, or with the information received from friends who may have come, or with statements made by the man himself if he recovers sufficiently, that cause is entered in the register." The part played by diagnosis in the determination of cause is, however, somewhat visionary; for Dr. Hooper says that there are no symptoms peculiar to hemp drug insanity except perhaps more speedy recovery, and that an accurate history is "absolutely essential; it is the only means by which you can arrive at a diagnosis." As to the statements of friends, Dr. Hooper seems to think that friends visit patients in the majority of cases. If this is so in Lucknow, his experience differs from that of Superintendents elsewhere. It is possible, however, that he may be mistaken, for it appears that enquiries from friends are "not ordinarily" made by him, but by the Deputy Superintendent. The statements of lunatics also appear from his evidence rarely to affect the entries. There is one point on which Dr. Hooper specially insists, *viz.*, that any fact established regarding heredity would exclude the ganja theory. Turning to the cases for 1892, it is found that there was one case in which the lunatic's brother was insane, and another where a direct ancestor was insane; but no notice was taken of these facts in determining cause, and the cases were entered as due to hemp drugs. It also appears that in 14 out of the 17 cases shown as due to hemp drugs, this cause is entered in accordance either with the entry in the papers regarding cause, or with that regarding the lunatic's habits. Of the remaining three cases, there is in one an alleged statement by the lunatic's brother (afterwards denied). In another the lunatic "recognizes bhang and makes contradictory statements as to its use." In the third, there is the statement of the lunatic himself while still insane.

The second Superintendent who states that he adopts exceptional practice is Brigade-Surgeon-Lieutenant-Colonel Keith of Hyderabad (Sind), who says that "the only ground, so far as I can remember, on which I would enter cause would be information of friends or the statement of the insane after he had recovered his wits." It is striking that of the 13 cases set down to hemp drugs in 1892, the cause as entered in the register corresponds in 10 cases with that entered in the papers sent with the lunatic. In the other three cases no basis for the entry of cause is given at all. In one case the Superintendent told the members of the Commission who visited the asylum that the entry was based on a statement made by the father; this the father now denies. In the other two cases, no such explanation was given by Dr. Keith to the members of the Commission; but that officer now says (probably on the authority of some subordinate) that these two lunatics used to ask for the drug in the asylum. No record of any such fact was found in the register. The Commission are unable in view of all that has been ascertained of these cases to attach much weight to these statements.

The third exceptional case is that of Surgeon-Major Dobie of Madras. In his letter of 20th October 1893 (*vide* Vol. II Appendices) Dr. Dobie said: "I am responsible for the entry of the cause as ganja in the first 14 cases [of 1892]. In no case have I entered it as a cause without such evidence as led me

to a reasonable belief that it was so." But in his evidence before the Commission on 22nd January 1894, this officer stated: "My reasonable belief as to cause was based on reading the papers and seeing whether they showed a probable cause of insanity, and on enquiry from the lunatic.....I feel very little confidence in the diagnosis I have made ascribing these cases to hemp drugs."

Statistics are based on the descriptive rolls.

516. There is clearly no valid ground in the practice of these three Superintendents for modifying the general statement based on the frank admission of the great majority of the Superintendents that the entries regarding cause in the registers, and therefore the figures in annual Statement No. VII, have been based wholly on the descriptive rolls or similar papers received with the lunatics. This practice has, no doubt, become established owing to the following considerations. As already stated, many Superintendents have recognized these papers as practically the only material they had for determining cause. They have not had adequate opportunities for making enquiries themselves. They have had a general impression that the information supplied by Magistrates or police was as good as the Government required for statistical purposes, and they have accepted it accordingly. As a rule they have regarded this question of cause as one of little or no practical importance. The Government prescribed Statement VII, and pressed to have the columns filled up; and as a rule the orders were carried out in this somewhat mechanical way. Surgeon-Major Carruthers, Superintendent at Calicut, perhaps puts this view in the strongest terms when he says: "My position as Superintendent of the Lunatic Asylum requires me to take charge of insanes when they are sent in, and retain them until they are fit for discharge. I am simply keeper and incidentally medical attendant, and not responsible for any statements and certificates received with the patient so long as they are in order." The same view is, however, as clearly expressed by Brigade-Surgeon-Lieutenant-Colonel Hooper when he says: "I do not consider that the question of cause is one which affects the treatment of cases. My inquiries therefore into cause are of a statistical, not a practical, character. The result will not affect my treatment of the case." Even to an officer who sees that the knowledge of the cause may help him in the treatment of the case, responsibility for the accuracy of the returns is a very minor matter. Surgeon-Lieutenant-Colonel Leapingwell (Vizagapatam), for example, says: "The point, of course, is chiefly one of personal interest to me in the treatment of the case. An entry was made (in the particular case under discussion) on the papers. I omitted to alter the register." It is clear then that the medical officers in charge of asylums have not felt that they have been in any way responsible for the accuracy of the figures contained in annual Statement VII regarding causation of insanity; and that these figures derive no value from the fact that the statement bears the signature of a medical man; for their value practically depends entirely on the character of the inquiry in which the information contained in the descriptive roll was in each case collected.

Untrustworthiness of descriptive rolls.

517. This inquiry is very unequal in its character. The lunatic, before being sent to the asylum, is for a time under the observation of the Civil Surgeon. The latter has to certify to the man's insanity and to the facts which have led to that conclusion. Sometimes the Civil Surgeon fills up the descriptive roll as well as the medical certificate. But the more general practice is that he confines his attention to

the medical certificate, leaving the descriptive roll, which contains all that is known of the lunatic's history, to be filled up by the Magistrate or the police. Where it is the practice for the Civil Surgeon to fill up the descriptive roll, the entry regarding cause is made by him or under his orders. Even in that case, however, he is generally compelled to accept the statements of the police. The majority of the lunatics sent up are wanderers who have no friends. Friends, even when there are any, are averse to appear lest they should be called on to contribute to the support of the lunatic. The following statements may be taken as typical of the usual experience of Civil Surgeons in this respect: "As Civil Surgeon, I got the information from friends or from the police. Very often I had cases where no friends came. In such cases I trusted to the police or wherever I could get my information" (Surgeon-Major Boyd, Colaba). "The information I give in Form C is generally very incomplete, as I have only the lunatic to get it from" (Surgeon-Major Burke, Poona). "The friends very rarely attend. As a rule, then, I am left entirely to the statement or form received and to the police" (Surgeon-Major Emerson, Bareilly). Thus, even where the Civil Surgeon signs the descriptive roll, he bases his entries therein as a rule on information supplied by the police. The more general practice is therefore also the more correct, to have the descriptive roll formally filled in by the police and signed by a Police officer or Magistrate, as the police supply the information. The inquiry into the history of the case is not an inquiry conducted by a professional man from the persons likely to know most about the lunatic. The information consists often merely of the guesses of police officers as to the history and habits of a friendless and homeless wanderer; and in other cases, where a local inquiry is possible, it is generally made by a subordinate police officer.

"I am aware," says the Surgeon-General of the Bombay Presidency, "that inquiries in these cases are generally conducted by a subordinate officer of police." Surgeon-Captain Walsh, of the Calcutta Asylum, says: "The descriptive rolls are filled up as a rule by a Native Police Inspector on the information of a native policeman." Surgeon-Lieutenant-Colonel Bovill, of Patna, goes further. He says: "The statements in the descriptive rolls regarding cause are as a rule not very reliable. I cannot say what grade of police records them. But I think the information is often in small villages brought by chaukidars." Surgeon-Lieutenant-Colonel Crombie, Superintendent, General Hospital, Calcutta, says: "The inquiry is made by the police. I have myself seen an inquiry going on in which a constable was filling in the papers from the statements of the lunatic himself, the man being at the time insane. This may be exceptional, but I have seen it. In any case I distrust this descriptive roll." These are some typical statements regarding the agency which, as a rule, collects the information on which the asylum statistics as to cause are based. Sometimes, as at head-quarters, the inquiring police officer may be an Inspector; but, as a rule, he is very subordinate. It is impossible to share the cheerful optimism of Surgeon-Lieutenant-Colonel O'Brien, of Benares, who says that "when ganja is assigned, the man was probably a notorious ganja smoker. The inquiry may be conducted by a chaprassi, yet he might be right in that." It would be absurd to accept without great distrust the statements, especially as to the cause of insanity, compiled by such an agency as has been described.

This distrust of the descriptive roll is intensified when the source of the information is considered. If the police think it worth while, or find it possible and convenient, to make anything of the nature of an inquiry, they find that they have to be satisfied with the very poorest material. Sometimes, as shown above, it is the statement of the lunatic himself while still insane that is recorded, not only as to history and habits, but also even as to the cause of his insanity. Often, as in the case of garden coolies in Assam or wandering mendicants all over India, it is the statements of mere casual acquaintances who know little of the lunatic's habits and nothing of his past history or of that of his family. Even when friends are found from whom inquiry can be made, they are generally of the most ignorant and unintelligent type. It is from the classes of such a type that most of the inmates of our asylums are taken. It is very rare indeed to find one of the higher and more intelligent classes. The ignorant and uneducated persons who ascribe a child's epilepsy to his having accidently touched the painted stone that represents the village god while playing under the sacred tree, or a fit of insanity to the attack and possession of a *bhût* or village ghost, who know nothing of causality, except in the most ordinary affairs of home or agricultural life, beyond the mere association of coincidence, who believe in no cause which they do not see except witchcraft, whose powers of observation are quite unexercised and undeveloped: such persons must form most unpromising material even for the most patient and intelligent enquirers to work on. The information gleaned from them by such agency as has been above described must be of the most incomplete and unsatisfactory character. It is not surprising that moral causes of insanity, being much less palpable than physical causes, should sometimes be overlooked. A much more surprising fact is the ignoring of many physical causes. Dr. Wise, then Superintendent of the Dacca Asylum, gave a remarkable illustration of this in his report for 1872: "It is a curious circumstance that in Bengal insanity is never traced to blows on the head, which in Europe is a not infrequent cause. This is the more surprising, as there are few races, I believe, who so commonly have marks of blows on their heads as Bengalis. Out of 190 males in the asylum on 1st January last, 57 (or 30 per cent.) had more or less extensive scars or cuts or contusions on the head. In a considerable proportion the blow must have been so severe as to have caused violent concussion of the brain. Yet in the records of this asylum there is no instance of insanity attributed to this cause."

Finally, the distrust of the descriptive roll must be further intensified by the consideration of the pressure brought to bear on subordinates to supply information as to cause. An illustration of this may be found as early as 1863 in the Resolution of the Government of Bengal on the Asylum Reports for 1862. And a striking illustration of the effect of this pressure is found in the Dullunda Asylum returns for the following year (1863), in which the cause in several cases dating from the year 1857 and onwards was altered from "unknown" to "ganja smoking." The same pressure is still brought to bear on those responsible for the entries of cause. Surgeon-Major-General Turnbull, the head of the Medical Department in Bombay, says: "There is a column in Statement VII headed "Unknown" which is intended for the entry of cases in which the cause has not been ascertained with reasonable accuracy. If this column was largely used, I should think it would be a matter of censure on the person on whom the responsibility for inquiry rests." This demand for much information where little

information is available, and this insistence on ascribing a cause where reasonable presumption as to cause is so rarely possible, have had a powerful influence in rendering the statistics untrustworthy. The same tendency is seen at work in other provinces. In Madras the effect of the remark in paragraph 5 of the Government Resolution on the Lunatic Asylum Report for 1890 stigmatizing the Calicut Asylum as "the worst" in respect to the average of unknown causes and of the Surgeon-General's Circular No. 12, dated 28th September 1891 (issued in consequence), is clearly in evidence. In Bengal, Surgeon-Lieutenant-Colonel Meadows, of Berhampur, says: "We assign cause too often ourselves: it is insisted on; and we are constrained to enter cause before it has been properly ascertained." Surgeon-Major Baker, of Rangoon, says: "I think that officers are under the impression that it looks as if they were not zealous if they do not find a cause." Brigade-Surgeon-Lieutenant-Colonel Gaffney, of Jubbulpore, says: "I think that there is a tendency to assign causes too readily;" and he intimates his concurrence in a strong protest made by Surgeon-Major-General Rice when Civil Surgeon of Jubbulpore in 1880 against this tendency. In Assam, Mr. Driberg, Commissioner of Excise, says: "If a man (policeman) does not enter cause, I know by experience that the District Superintendent of Police gets a slip telling him to send a more experienced man, or fine this man for carelessness." The remarks made in 1880 by Dr. Rice, now Surgeon-General with the Government of India, in reference to an unfavourable comment in the Chief Commissioner's review of the report for 1879, may be quoted: "I think it is of doubtful value," he said, "to set down everything told in this way as if it were reasonably true. If these returns are ever to be made use of, it would be better to assign only such alleged causes as have some pretensions to being correct, omitting altogether those which are nothing more than mere conjectures. Even if a great number go unclassified, it is better so than that doubtful causes should be assigned."

Asylum statistics quite untrustworthy.

518. There is one class of cases which seems at first sight to differ from the rest, the cases in which lunatics charged with crime have been acquitted on the ground of insanity. Surgeon-Major McKay, of Nagpur, says: "In criminal cases the cause is generally taken from the judgment of the Court." This statement is apparently too strong. The Commission have had to examine the records and papers in the cases of many criminal lunatics. In the majority of cases the Judge is found to be content with the evidence of the Civil Surgeon as to the fact of insanity, and to consider it unnecessary to make any inquiry as to cause. In such cases the information sent to the asylum authorities is precisely of the same character as that furnished in non-criminal cases. It is very rare indeed that any evidence as to cause appears in the evidence tendered in Court, and still more rare for the Judge to discuss the cause. For all practical purposes, the remarks above made regarding the untrustworthy character of the information supplied to the Superintendents, and of the asylum statistics as to cause based thereon, apply to all classes of cases.

Dacca Asylum no exception.

519. Although these statistics have been discussed seriously from year to year, they have not been much used as the basis of measures of ganja administration except in the case of Burma. In this case the Commission found that the measures taken

in Burma were ostensibly based on the lunatic asylum returns which were quoted by more than one Chief Commissioner, special reference being made to the figures for the Dacca Asylum. This special reference to this asylum and the fact that it is situated in the most important ganja-consuming tract in India were among the reasons why the Commission summoned Surgeon-Lieutenant-Colonel Crombie (Bengal witness No. 104) as a witness; for he had been seven years Superintendent of that asylum. Before the Opium Commission also, and in an interesting discussion on opium published as a Supplement to the *Indian Medical Gazette* of July 1892, Dr. Crombie had incidentally spoken strongly of the evil effects of hemp drugs as seen in his asylum experience. The Commission hoped therefore that Dr. Crombie might be found to have devoted special attention to his asylum work, and to be able to speak with exceptional authority. He informed the Commission in his written evidence that "nearly thirty per cent. of the inmates of lunatic asylums in Bengal are persons who have been ganja smokers, and in a very large proportion of these I believe ganja to be the actual and immediate cause of their insanity. But though I am not prepared to say that the moderate use of ganja is never the cause of insanity, it is most frequently the result of long excessive use, and especially of occasional debauches with the drug. It has the same relationship to insanity in India that alcohol has in Europe, and may be the cause of fierce maniacal excitement of short duration (as in delirium tremens) or of a chronic cheerful mania which is the characteristic insanity of Indian asylums. It has not the same tendency to lead to dementia, the result of tissue changes in the brain, as alcohol has. Like alcohol, it will especially lead to insanity in persons of deficient self-control who take to the drug as a relief from mental trouble. Both forms of ganja insanity, the acute and chronic, are distinguishable by the symptoms. (See separate memorandum.)"

These views, which are stated in greater detail in a separate memorandum, are based entirely on his experience as Superintendent of the Dacca Asylum and as visitor to other asylums; for Dr. Crombie says: "In my practice outside of lunatic asylums my experience is confined to very few cases, only two or three in the whole course of my service, of ganja intoxication brought to hospital." The Commission were anxious to ascertain how far these views might be regarded as having authority. They accordingly examined the registers and case books of the Dacca Asylum for all the years during which Dr. Crombie had been Superintendent, and perused his reports. They were unable to find in these records any ground for thinking that Dr. Crombie's practice differed from that of other Asylum Superintendents, or gave him special opportunities of knowledge. They took the registers for these years and also the papers for all the hemp drug cases of 1887 (Dr. Crombie's last year at Dacca) to Calcutta to discuss them with Dr. Crombie. That discussion is contained in the record of his oral evidence.

First, as to procedure, Dr. Crombie told the Commission that the descriptive roll is "by no means trustworthy," but that "subsequent discoveries" were made in the asylum by examination of friends or of the lunatic on recovery and by other means, and that the entries in the asylum books would be altered accordingly. "This," he said, "was my practice." The Commission had found no trace of this practice in the asylum records; and they showed Dr.

Crombie the registers and asked him to point out any such alterations. He then withdrew his statement, and accepted as accurate the statement of Rames Chandra Sib, Overseer of the Dacca Asylum, who has made the entries in the registers and compiled Statement No. VII ever since 1880. His statement is: "The cause is entered in the register from the descriptive roll..... Cause is never entered in the register from enquiry made after the patient's admission. I know of no case of this being done. The entry made at the top of the page would never be altered. But if any enquiry which I might make showed cause not hitherto known, this fact would be entered in the history of the case. I remember such cases, and I might be able to point them out. But that entry in the history of the case would not alter the cause as shown in Statement VII of the annual report. That statement is filled up only from the entries made in the descriptive roll as copied into our register." Dr. Crombie's procedure then differed in no respect from the most mechanical and unintelligent record of causation in any asylum in India, for it was left entirely as clerical work to a subordinate. And the only statistics on which Dr. Crombie bases his views regarding insanity rest on the descriptive rolls, of which he strongly declares his distrust.

Secondly, in regard to Dr. Crombie's attention to the special matter of causation of insanity, it appears that "there was no discussion of cause in any annual report written by him from Dacca, nor any formal discussion in writing." Like other Superintendents, he seems not to have felt that his duty required special attention to this subject.

Thirdly, the Commission discussed with Dr. Crombie the cases of 1887, and the results of this discussion of them are recorded in his oral examination. They afford clear proof of the fact that even a careful examination of the papers received with the lunatics on their admission would have prevented five out of the fourteen cases being recorded as hemp drug cases (*viz.*, the first, fourth, tenth, thirteenth, and probably also the twelfth), and would have led to two more being recorded as mixed or doubtful cases (*viz.*, the second and fourteenth). The history in the asylum should have prevented the fifth case being retained as a ganja case; for the true cause (peripheral irritation) was clearly established, and insanity was cured on removal of that cause. It should also have led to the rejection of the eighth case, or at least to its being recorded as a mixed case. Thus nine out of the fourteen hemp drug cases of 1887 at Dacca are found to have been erroneously entered as such. There remain only five true hemp drug cases. Dr. Crombie says: "Taking my whole asylum experience, I think that this may probably be accepted as fairly representative of the real state of the case." The total admissions in 1887 to the Dacca Asylum were 55. Of these Dr. Crombie now accepts only 5 (or 9 per cent.) as due to hemp drugs. And he states that this may be accepted as fairly representative of the real state of the case, so far as his experience enables him to judge.

Fourthly, as to Dr. Crombie's conclusions. As there were fifty-five admissions into the asylum in 1887, the number of cases (five) which may reasonably be attributed to ganja turns out to be only nine per cent. As Dr. Crombie says that the "chronic cheerful mania" which he describes is only found in a portion (or, as his separate memorandum shows, in a minority) of the admissions, and as he admits that it "may be due in part to difference of character" and not to the drug, there does not seem to be much, if any, ground for associating this chairomania with hemp. And in view of the small proportion of true hemp

drug cases and the large proportion (nearly 2 to 1) of error in the cases accepted and recorded as hemp drug cases in Dr. Crombie's time too much weight should not be attached to his views regarding the clinical features of hemp drug insanity. The results of a careful analysis and examination of his cases corresponds on the whole pretty accurately with the examination of the cases of 1892 for all India made by the Commission. Looking back at his work in Dacca from his present point of view, Dr. Crombie seems to have thought that he had had some experience of special value, but the impression appears on examination to be due to a mistake of memory. There is practically nothing that differentiates his experience or the practice of the Dacca Asylum from that of other Superintendents and other asylums in India.

Explanation of the use of these worthless statistics.

520. It may well seem extraordinary that statistics based on such absolutely untrustworthy material should have been submitted year after year in the asylum reports. It is extraordinary, and cannot certainly be fully justified. The following considerations serve to a certain extent to explain this extraordinary fact. In the first place, as is pointed out by several Superintendents, these officers did not know what grade of police or what kind of agency was employed in the inquiry. They believed that they were bound to accept, and justified in accepting, without question what came to them with an appearance of official authority. In the second place, all the Superintendents, except those in the towns of Madras and Bombay, have their asylum work in addition to other medical duties. They have found themselves unable to devote that amount of time and care to their asylum work which would enable them to speak as experts or to supply information of any real value. Some of the best of them have stated to the members of the Commission who visited the asylums that they constantly found themselves subordinating the asylum work to duties which appeared more pressing and more important. In the third place, as already pointed out, they have been so pressed to give statistical information that they have often done so without considering whether it could be regarded as scientifically or even reasonably accurate. In the fourth place, most of the Superintendents, though they had long practised medicine in this country, had never seen any of the effects of hemp drugs except their alleged effects in producing insanity in the cases attributed in the papers to the drugs. Several Superintendents speak clearly of this ignorance of the effects of the drugs. The remarks of three may be quoted as being specially interesting. Surgeon-Lieutenant-Colonel Leapingwell (Vizagapatam) says: "I should myself have put down ganja as the cause of insanity in any case where I examined the friends if they merely said the man used ganja and I could get no other cause, as I did not discriminate between the excessive and moderate use. I should go much more carefully into the matter now, since I have in the course of the present inquiry learned so much more about the use of the drugs." Surgeon-Major Cobb, of Dacca, says: "As to the effects of ganja generally, I should say that until I began to study the question with a view to give evidence before the Commission, although I had a vague notion that ganja smoking was prevalent among the lower classes in Bengal, I had no idea that the practice was as common as I have since found it to be." Surgeon-Major Willcocks, of Agra, says: "Ordinarily it has been the practice to enter hemp drugs as the cause of insanity where it has been shown that the patient used these drugs. I cannot say precisely why this is the practice. It has come down as the traditional practice. As a matter of fact, until recently I looked on these drugs as very poisonous. As I

have already said, my ordinary medical practice did not bring me into contact with them at all. I only came into contact with them in the asylum. I had no idea that they were used so extensively as I find on enquiry to be the case. I have made enquiry in connection with the attention drawn to the matter recently."

These are some of the explanations which may be offered for the submission by Superintendents of such statistics year by year. Further, though such evidence as that of Surgeon-Major-General DeFabeck of Madras shows most clearly how little knowledge some heads of the Medical Department have had of the untrustworthy character of the statistics, it does not show this more clearly than does the mere fact that year after year these statistics have been seriously discussed alike by these officers and by the Governments under whom they serve.

Further inquiries made by the Commission.

521. The Commission were forced to the conclusion that there was no trustworthy basis for a satisfactory and reasonably accurate opinion on the connection between hemp drugs and insanity in the asylum statistics appended to the annual reports. They felt that they must conduct for themselves as full and searching an inquiry as was possible within the time at their disposal into the history of a considerable number of cases. As already stated, they selected as the subject of their inquiry all the cases admitted into all the asylums in India in 1892 and ascribed to hemp drugs. They took up each of these cases separately in the asylum, and ascertained what information was obtainable in regard to it from perusal of the original papers and the asylum registers, and also by enquiry from the Superintendent and Asylum officials. Having recorded all such information, they asked the Superintendent of each asylum to conduct further inquiry into each case and report finally on it, and they requested Local Governments to direct the Magistrates and Civil Surgeons of districts to which the patients belong to give the Superintendent all necessary assistance. The Commission added: "In view of the importance of this branch of the inquiry, it is suggested that, wherever this is possible, a careful local inquiry should be conducted by a trustworthy and experienced Magistrate, in consultation with the Civil Surgeon, to ascertain the past personal and family history of the patient, and any circumstances likely to throw light on the cause of his insanity. The record of this inquiry should in each case be submitted to the Commission through the Superintendent of the asylum in which the patient was treated to enable him to submit the report above mentioned." All this information, both that collected in the asylums and that collected in these further inquiries, is recorded in Vol. II Appendices. Only the final report of the Superintendent is printed, unless it is inaccurate or incomplete, or unless there is anything of interest in the records which he has not noticed. In these cases notes containing the points omitted or inaccurately stated, or extracts from the records, are appended to his report. Prefixed to these papers is a statement of the decision of the Commission on all of the cases, showing very briefly for each why it has been accepted or rejected. In a few cases the results of the inquiries are unsatisfactory; for it has been impossible occasionally to get any further information; and occasionally the inquiry, even though feasible, has not been conducted with sufficient care and intelligence. On the whole, however, the result is the collection of a body of information about these selected cases far superior to anything heretofore available.

The result of the examination of all the cases attributed to hemp drugs in 1892 may be thus shown :—

Province.	Asylum.	Total admission in 1892.	Cases attributed to hemp drugs in 1892.	Number of cases accepted.			Number of cases rejected.	Percentage.	
				As due to hemp drugs.	As "mixed" cases.	Total.		Column 4 to column 3.	Column 7 to column 3.
1	2	3	4	5	6	7	8	9	10
BENGAL ...	Dullunda ...	64	18	5	3	8	10	28·1	12·5
	Patna	38	8	2	1	3	5	21·0	7·8
	Dacca	43	15	4	1	5	10	34·8	11·6
	Berhampur ...	38	11	3	1	4	7	28·9	10·5
	Cuttack	3	1	...	...	...	1	33·3	0·0
	Total ...	186	53	14	6	20	33	28·4	10·7
ASSAM ...	Tezpur	43	13	...	3	3	10	30·2	6·9
NORTH-WESTERN PROVINCES.	Benares	47	6	5	...	5	1	12·7	10·6
	Agra	72	18	5	2	7	11	25·0	9·7
	Bareilly	76	11	2	4	6	5	14·4	7·9
	Lucknow	89	17	3	1	4	13	19·1	4·4
	Total ...	284	52	15	7	22	30	18·3	7·7
PUNJAB ...	Delhi	54	10	4	1	5	5	18·5	9·2
	Lahore	78	12	6	3	9	3	15·3	11·4
	Total ...	132	22	10	4	14	8	16·6	10·6
CENTRAL PROVINCES.	Jubbulpore ...	35	6	...	1	1	5	17·1	2·8
	Nagpur	27	7	2	2	4	3	25·9	14·8
	Total ...	62	13	2	3	5	8	20·9	8·0
MADRAS ...	Madras	216	17	2	4	6	11	7·8	2·7
	Vizagapatam ...	8	1	...	1	1	...	12·5	12·5
	Calicut	21	1	...	...	...	1	4·7	0·0
	Total ...	245	19	2	5	7	12	7·7	2·8
BOMBAY ...	Colaba	162	13	5	3	8	5	8·0	4·9
	Poona	36	6	4	1	5	1	16·6	13·8
	Ahmedabad ...	19	9	2	1	3	6	47·3	15·7
	Ratnagiri ...	26	5	2	1	3	2	19·2	7·6
	Dharwar	7	1	...	1	1	...	14·2	14·2
	Hyderabad (Sind) ...	40	13	3	1	4	9	32·5	10·0
	Total ...	290	47	16	8	24	23	16·2	8·2
BURMA ...	Rangoon	102	3	2	1	3	...	2·9	2·9
	GRAND TOTAL ...	1,344	222	61	37	98	124	16·5	7·3

Out of 1,344 admissions to the asylums of British India during 1892, there are shown to be only 98 cases (or 7·3 per cent.) in which the use of hemp drugs may be reasonably regarded as a factor in causing the insanity. If the "mixed" cases in which the hemp drugs have only been accepted as one of several possible causes are omitted, the percentage falls to 4·5. It must be borne in mind, however, that there were 42 per cent. of the admissions for 1892 in which the cause of insanity was shown as "unknown." Among these "unknown" cases there may, no doubt, have been some in which hemp drugs may, as in the accepted cases, have played some part in causing insanity. If it had been possible to ascertain the history of these "unknown" cases, it might have been found that there was in a considerable number of them a history of the use of hemp drugs, and perhaps that in some of them these drugs had played some part at least in causing the insanity. It might appear at first sight to be more correct to take the percentage, not on the total admissions into the asylums, but on the "known" cases among these admissions. The total number of "known" cases (*i. e.*, cases in which the cause was supposed to be known) among the admissions for 1892 was 775. This would give a percentage of hemp drug cases at 12·6. But the Commission do not see their way to accept this method of calculation as accurate. For they consider that both experience and the whole history of this inquiry have shown that there is little difficulty in ascertaining the existence of the ganja habit among persons such as are sent to the asylums, and also that there is no hesitation in ascribing insanity to that habit. They are therefore of opinion that it is safe to presume that in the great majority of the "unknown" cases no ganja habit did exist, and that they would be further from the truth in taking the percentage at 12·6 than at 7·3.

Mixed cases.

522. On the other hand, it would be far from accurate to say that it has been ascertained that the insanity was in all these 98 cases due solely to hemp drugs. In the first place, there are 37 of them (or nearly 38 per cent.) in which there is a clear history of some other cause. The causes which are shown thus to have possibly co-operated with hemp drugs in inducing insanity (with the number of causes for each) are as follow :—

Heredity	4	Grief	3
„ alcohol and vice ...	2	„ hard life and liquor ...	1
„ and business losses ...	1	„ and opium	1
Fever	1	Madak	1
Sun and malaria	3	Acholol	11
Syphilis	1	„ and opium	1
Sexual excess	1	„ and vicious habits ...	2
Dhatura	3	„ and epilepsy ...	1

Heredity.

523. Only a few remarks need be made regarding these "mixed" cases. So far as the inquiries have established the real facts regarding these cases, there are seven into which heredity enters as a predisposing fa ctor. The number of cases attributed to heredity throughout India in 1892 was 51, or 3·8 per cent. of the admissions (1,344). These seven cases may perhaps be added to this number, giving a total of 58, or 4·3 per cent. In England the percentage of cases attributed to heredity is 19·0 for males and 22·1 for females. These percentages are based on statistics for ten years, dealing with 136,478 patients (*vide*

Hack Tuke's Dictionary of Psychological Medicine; article "Statistics of Insanity"). The author of this article points out that "the reluctance of the relatives of patients to give information on this painful point leaves the proportion undoubtedly far too low." In view of this, it cannot be denied that the influence of heredity is in India practically neglected. The importance of giving due weight to this factor becomes the more manifest when it is considered that a cause which in a normally healthy brain would produce no effect is sufficient to overthrow the mental equilibrium of a person with hereditary predisposition.

Alcohol.

524. There are eighteen of these mixed cases in which alcohol has been ascertained to be a possible factor. In view of the connection between alcohol and insanity as established in Europe, and in view of the clear evidence that brain lesions are directly caused by alcohol, there seems certainly not less reason for ascribing these cases to alcohol than to hemp drugs. The English statistics show percentages of 19·8 and 7·2 of cases as due to alcohol for males and females respectively. The Commission are of opinion that such high percentages cannot be expected in India; for, although the action of alcohol is more injurious in the tropics, the people of this country are generally much more abstemious. The percentage of cases attributed to alcohol in each province in 1892 is given below, and for purposes of comparison the percentage of the accepted hemp drug cases (including the "mixed" cases) is also shown:—

Province.	Percentage of hemp drug cases.	Percentage of alcohol cases.	Total of columns 2 and 3.
	2	3	4
Bengal	10·7	2·1	12·8
Assam	6·9	6·9	13·6
North-Western Provinces	7·7	3·5	11·2
Punjab	10·6	1·5	12·1
Central Provinces	8·0	...	8·0
Madras	2·8	2·8	5·6
Bombay	8·2	7·2	15·4
Burma	2·9	11·7	14·6
Total ...	7·3	4·4	11·7

The figures in regard to alcohol cannot be accepted as quite satisfactory, because they have not been tested. But the tendency of the figures as they stand is to show that in the provinces where hemp drugs are the less used, alcohol is the more frequently assigned as the cause of insanity, and *vice versâ*. It is possible either that the figures to a certain extent reflect the facts, or merely that those who have to account for insanity turn most easily to intoxicants, and came that intoxicant which most readily occurs to them.

Dhatura.

525. There are three "mixed" cases in which dhatura has been ascertained to be a possible cause of insanity. In view of the facts that dhatura is a more potent intoxicant than the hemp drugs and produces furious delirium, and that Dr. Cunningham's experiments appear to indicate clearly that grave cerebral lesions are very early produced by dhatura and are not produced by ganja, it would probably be safer to accept these cases as due to dhatura and not to hemp drugs. The Commission have, however, accepted them as "mixed" cases. It is unnecessary to make any special remarks on the "mixed" cases in which causes other than heredity, alcohol, and dhatura appear to contribute to the insanity.

Cases due to hemp drugs.

526. Even in regard to the remaining 61 cases, it must be borne in mind that it is impossible to say that the use of hemp drugs was in all the sole cause of insanity, or indeed any part of the cause. The following considerations combine to demand caution and reserve in pronouncing an opinion on this point.

Firstly, there are twelve cases in which it has been found impossible to obtain any further information by local inquiry. In these cases we are thrown back on the original papers and the asylum history. Besides these, there are ten more cases in which the patients are beggars and foreign labourers about whose past history no satisfactory information is obtainable. Thus there remain only 39 of these 61 cases about which anything like a satisfactory inquiry has been possible. Further, a great majority of these cases come from the lower orders of cultivators and labourers, from whom information of any value is very difficult to obtain as to other than the most apparent causes. The fact of the existence of the hemp habit is easy enough to ascertain, but that it is the cause, or one of the causes of the insanity, or that it even preceded the insanity, is much more difficult to establish.

Secondly, the method of inquiry has not been satisfactory in regard to all the cases referred for local inquiry. In regard to the great majority, the instructions issued by the Commission as to the agency by which this further inquiry should be conducted have been carried out. But in some, it will be observed, even this further inquiry has been left to the police. Then again there are cases, such as those of the Hyderabad (Sind) Asylum, in which the Superintendent has necessarily been the principal agent in the inquiry, and has, perhaps, not unnaturally, but certainly unfortunately, evinced a strong tendency to defend the old asylum entries regarding cause. The series of questions framed by the Civil Surgeon of Delhi for use in the further inquiry also illustrates a tendency to assume that the cases were hemp drug cases, and thus to limit the scope of the inquiry.

Thirdly, it may be noted that excess in the use of hemp drugs is very frequently only one of several vices in which a dissipated man indulges. Further inquiry has proved this in several cases. There is strong probability that had information been complete, it would have been established in many more cases. It is impossible in such cases to say definitely to what form of excess insanity may be mainly due. Further, it is an accepted and established fact that intemperance of any kind may sometimes be not the cause of insanity, but an early manifestation of mental instability. Dr. Conolly Norman (Hack Tuke's Dictionary of Psycho-

logical Medicine; article "Mania") says: "The patient also indulges in intoxicants with very undue or unwonted freedom, and thereby precipitates the course and aggravates the symptoms of his disease." One or two cases have been rejected by the Commission on the ground that the evidence merely showed that the habit of use of hemp began at the same time as the mental aberration, or even later. There may have been other cases in which this would have been shown had the information been complete. It is possible therefore that more complete information might have shown in some cases, not only that other causes contributed to the insanity, but also that hemp drugs had nothing whatever to do with inducing it.

These and similar considerations already indicated demand caution in the expression of any judgment as to the causation of insanity in this country. If in England opinion, based on inquiries such as are there possible, has to be stated with caution, this is much more necessary here. In many of the cases in which the hemp drug habit has been established, it is impossible to feel certain in view of the defective character of the information that the drugs have been the sole cause, or perhaps indeed a cause at all, of the insanity. The Commission have, however, felt themselves justified in accepting these 98 cases of the year 1892 as reasonably attributable, in whole or in part, to the use of hemp drugs. These are the best cases they have been able within the time at their disposal to obtain. Of these 98 cases, 97 were males and one female, 82 being Hindus and 16 Muhammadans.

Classification and types of accepted cases.

527. In the asylum returns these cases were classified according to the following "types":—*Toxic insanity*, 39; *mania*, 42; *melancholia*, 3; *dementia*, 4; while in ten cases the patients had recovered prior to admission, and did not exhibit symptoms of mental aberration while in the asylum. The Commission think it well to point out that although in these instances symptoms of insanity were never observed by the Asylum Superintendents, yet the cases were returned in the annual reports as cases of *toxic insanity*, and thus helped to augment the annual returns (Statement VI)—a fact which very strikingly exemplifies the purely mechanical manner in which these returns have hitherto been compiled.

Occupation.

528. The occupations, etc., of these 98 cases may be tabulated as follows. They have been abstracted from the "descriptive rolls" or from information supplied on subsequent inquiries at the instance of the Commission. The Commission cannot, however, vouch for the accuracy of these returns. In one instance an insane of the lower classes, described as a "zamindar," proved to be a school-boy, the son of a muharir in a munsiff's court.

Fakir ...	...	...	5
Beggar ...	...	...	16
Cultivator	...	...	13
Shopkeeper	...	...	7
Trader ...	...	...	12
Labourer	...	...	15
Servant ...	...	...	6
Sepoy ...	...	...	4
Teacher ...	...	...	1
			79

Panda ...	...	...	1
Student ...	...	...	1
Prostitute	...	...	1
Priest ...	...	...	1
Constable	...	...	1
Tahsil jemadar	...	...	1
Sowar ...	...	...	1
Not known	...	...	12
Total	...		98

Liability at various ages, and relapses.

529. The following table shows the relative liability to insanity at different ages in the hemp drugs cases. This information has been compiled solely from the "descriptive rolls," and in very many instances thea ges entered are doubtless only rough guesses. At all times it is difficult to ascertain the true age of a native of the lower classes, and in the case of wandering insanes, beggars, etc., the determination of age must necessarily be inexact and a mere approximation :—

Age from	15 to 20 years,	10	cases,	1	instance of a second attack.
„	21 to 25 „	32	„	3	„ one prior attack.
„	26 to 30 „	22	„	3	„ „
„	31 to 35 „	11	„	1	„ „
„	36 to 40 „	6	„	...	„ „
„	41 to 45 „	5	„	1	„ „
„	46 to 50 „	7	„	2	„ „
„	51 to 55 „	2	„	1	„ „
„	56 to 60 „	1	„	1	„ „
„	75 „	1	„	...	„ „
Age unknown		1	„	...	„ „
	Total	98	cases,	13	instances of relapses.

Duration of insanity.

530. The data for ascertaining the duration of insanity are either unreliable or not procurable in all cases for the periods during which the insanes were at large, and it is only with the duration of residence in asylums that the Commission can give any accurate details. The duration of the insanity before admission into the asylum for the 53 cases for which information is recorded is shown in the following table :—

Duration of insanity before admission to asylum.	15 to 20 years.	21 to 25 years.	26 to 30 years.	31 to 35 years.	36 to 40 years.	41 to 45 years.	46 to 50 years.	51 to 55 years.
One month and under ...	4	2	3	...	1	...	2	1
Not exceeding 3 months ...	3	3	2	1	1	1	...	...
Not exceeding 6 months ...	...	4	4	1	1	2	...	...
Not exceeding 12 months ...	...	3	3	...	...	...	1	1
Not exceeding 18 months ...	...	...	1	...	1	...	...	...
3 years	...	2	1	1	1	...	...	..
5 years	...	...	...	1	...	...	...	...
12 years	...	...	...	1	...	...	...	...

Out of the 98 accepted cases, 10 were not insane on admission into asylums, 29 were not cured, and 9 died during residence. Regarding the cases described as "not cured," it is necessary to explain that the expression is to be taken only relatively for the period during which the patients were under observation by the Commission, and which as a general rule would be under two years. The duration of residence in asylums of the 50 patients discharged during the period mentioned may be tabulated as follows:—

Ages of patients.

Duration of residence in asylum.	15 to 20 years.	21 to 25 years.	26 to 30 years.	31 to 35 years.	36 to 40 years.	41 to 45 years.	46 to 50 years.	51 to 55 years.	56 to 60 years.	75 > years.	Age not known.
Not insane on admission.	1	2	3	1	...	...	1	...	...	1	1
One month and under.	...	2	2	...	...	...	...	...	...	...	...
Not exceeding 3 months.	1	4	2	1	...	...	...	...	...	...	...
Not exceeding 6 months.	6	8	2	2	1	...	3	...	...	...	...
Not exceeding 12 months.	...	5	6	2	...	...	...	...	1	...	...
Not exceeding 18 months.	...	...	1	1	...	...	...	...	...	...	...
Not cured ...	2	9	6	4	3	2	2	1	...	...	...
Died ...	...	2	...	2	3	1	1	...	...	...	...

These figures would appear to indicate that the largest number of discharges, 38 per cent., occurred after a residence not exceeding six months in the asylums, and of the rejected cases 19 per cent. were discharged after a similar residence. After a residence of over six and not exceeding twelve months, 16 per cent. of the accepted cases (making a total of 54 per cent. for the whole year) were discharged, and 10 per cent. (a total of 29) of the rejected. Dr. Walsh (Bengal witness No. 112), in a supplement to his written evidence, remarks: "The average period under treatment in the asylum at Dullunda of 55 cases discharged cured during five years (1888-92) varied from 3 to 10 months, and many of these were kept under observation for some time after they had been pronounced sane. Of the 108 cases admitted, more than half recovered very quickly, and this points to some cause easily removable."

For the purpose of comparison, the duration of residence in asylums of the rejected cases of 1892 is given in the following table. This table contains only 121 cases, because of the 124 rejected cases, two were not cases of 1892 at all,

and one was rejected because it has been entered a second time on the statement:—

Duration of residence in asylum.	15 to 20 years.	21 to 25 years.	26 to 30 years.	31 to 35 years.	36 to 40 years.	41 to 45 years.	46 to 50 years.	51 to 55 years.	Over 60.	Age unknown.
Not insane on admission.	...	1	1	...	...	1	...	...	...	1
One month and under.	1	...	...	1	...	1	...	...	...	...
Not exceeding 3 months.	2	1	...	1	...	2	...	...	...	...
Not exceeding 6 months.	3	5	4	2	...	...	...	...	...	...
Not exceeding 12 months.	5	2	3	1	1	...	...	...	...	...
Not exceeding 18 months.	...	1	...	1	...	1	...	...	...	...
Not cured ...	2	11	19	17	8	3	1	...	...	3
Died ...	...	3	4	2	2	1	...	1	2	...

Proportion of recoveries.

531. The proportion of recoveries calculated on the 98 accepted cases would amount to 61·2 per cent., or, deducting from both sides the 10 patients who were not insane on admission, to 56·8 per cent. Calculated in the same manner, the percentage of recoveries of the rejected cases would be 34·7 and 32·4.

Mortality.

532. Calculated on the accepted cases, the mortality amounted to 9·1 per cent. In no single case, however, was the death due directly to the mental condition. The mortality in the rejected cases amounted to 12·3 per cent. on the total admissions. There is one fact which vitiates the figures in connection with mortality in asylums—that is, the practice which exists at all events in the Tezpur Asylum, Assam, of transferring dying patients to the "Moribund Ward" of the Charitable Dispensary for medical treatment.

Symptomatology.

533. The Commission would premise the analysis of the symptoms presented by the accepted cases by remarking that the information available is extremely meagre. As a rule the asylum records fail to afford a full clinical history of the condition of the patients on first admission, and the subsequent entries in the asylum case books are also frequently lacking in useful information. In one asylum no case book appeared to have been kept up in 1892. The medical certificates on which the patients are admitted into the asylums usually contain only sufficient evidence of the mental state to support an opinion as to the mere fact of insanity. The descriptive rolls are the only source in the vast majority of cases from which the mode of incidence and duration of attack, the habits, and the personal and family history of the patients can be ascertained. The value to be placed on certain entries in the descriptive roll has already been fully discussed. They have been shown to be untrustworthy, and there is no reason to suppose that other entries are more accurate or reliable.

In 17 out of 98 cases only is information recorded as to the nature of the onset of the symptoms; in eight it may be described "sudden;" in six as "gradual" or "slow"; and in three as "insidious." As a rule no detailed information is ascertainable regarding the nature of the premonitory symptoms or their duration. "Headache" has been mentioned, but beyond that there are no clinical symptoms. Sometimes alteration in habit is alluded to, but more frequently attention has first been drawn to the mental condition by some insane, violent, or destructive act which has led to the individual being sent to a medical officer for observation. Regarding the state of the general bodily health on admission into asylums, in 35 cases it is described as "good," in 20 "fair," in 8 "indifferent," in 6 "bad," in 3 "weak" or "very weak," and in the remaining cases no information is recorded. As a rule no records are kept of the form or measurements of the head, general physical features are not recorded, and thermometrical observations do not usually appear to be made. The facial expression is as a rule not described, and in three instances only is it referred to as "vacant." The appearance of a "ganja wart" on the palm is mentioned by one Superintendent. The gait is as a rule not described. Abnormalities or signs of disease of the sexual organs are not usually mentioned. The condition of the circulatory and respiratory systems are not as a rule recorded. Under the digestive system it may be mentioned that in fifteen cases food was refused, necessitating forcible feeding. No information as a rule is available regarding the glandular system, state of the skin, or character of the urine. Under the muscular system "tremor" has been referred to and "muscular twitchings like chorea." But such features as power of "grasp" of hands or reaction to electric stimulus are not mentioned. Under the nervous system—sight, hearing, taste, and smell—no systematic observations appear to be recorded; in only one asylum was there any record regarding the state of the pupils; in one asylum redness of the conjunctiva was mentioned; and in one asylum the eyes are described as "red." The conditions of nervous sensibility, hyperæsthesia and anæsthesia, do not appear to have received attention; and in one asylum only are reflex phenomena mentioned.

Regarding mental symptoms. In fifty-six cases incoherence of language is mentioned, in seven uncommunicativeness, in seven silentness, in nine talkativeness, in twelve muttering, and in twenty-two abusiveness or obscenity of language; in four cases the patients were "excited," in three roaring, in twenty-four noisy, in twelve restless, and in thirty-one sleepless. In seven cases there were symptoms of "exaltation," in thirteen quarrelsomeness, in twenty-nine destructiveness, twenty-five were homicidal, twelve suicidal—frequently the same case exhibited both tendencies—and thirty-six violent. In twelve cases there was laughter, in two dancing, in one absurd postures, and fourteen were either sad, crying, or moaning. Forty-six were dirty or filthy in their habits, twenty-one were indecent, in twenty-four there were delusions, and in four cases the patients are described as "childish."

The alteration in symptoms in the asylum was in some cases very rapid, so rapid in some instances as to be almost immediate. In others the progress towards sanity was slower; in some there were relapses, with occasional outbursts of violence; while others from being violent and abusive became melancholic or quiet and silly, or drifted into a condition of dementia.

Post-mortem examinations.

534. The cause of death in the nine fatal cases was as follows: One general debility, one cholera, two dysentery, one leprosy, one heart disease, one diarrhœa, one dropsy and old age, and one no cause assigned. In five of these cases no *post-mortem* examination appears to have been made; in the four in which it was conducted, the condition of the brain is not specially noted in three, while in one case—death from cholera—the following note is made: "Weight 43 oz.; both membranes and substance of brain congested, and lateral ventricles contained a very small quantity of fluid. Brain substance firm." As to the results of *post mortem* examinations in alleged ganja cases, therefore, the evidence is purely negative as to any even coarse brain changes being present. It may be remarked, however, that as a rule when autopsies have been conducted in asylums, it has been solely with the object of ascertaining the cause of death and not for purposes of pathological research. In most cases the brain does not appear to have been examined, and, when it has been examined, the information recorded is so meagre and superficial as to be valueless.

Diagnosis of hemp drug insanity.

535. Reviewing the mode of incidence so far as it can be ascertained, the type, general symptoms, and duration of cases in which the mental balance has been alleged to have been overthrown by the use of hemp drugs, the question arises are there any symptoms pathognomonic of the condition generally known as hemp drug insanity, and on what does the evidence rest that the use of these drugs may induce mental aberration? The evidence obtained by the Commission appears to indicate that in the cases of alleged hemp drug insanity which find their way into asylums, there are no typical features in the premonitory symptoms and no pathognomonic symptoms in the insane condition on which to base a determination of causation. The mode of incidence, the premonitory symptoms, and the symptoms of the insane state are practically the same in cases in which these drugs have never been used as in instances in which the mental equipoise has been accepted as being disturbed by their employment. The type of hemp drug insanity is mania, though in the subsequent history of a few cases there appears to be divergence from the type. The mania may be acute or chronic. The majority of medical witnesses who have studied the subject are clearly of opinion that there is nothing typical in the symptomatology of hemp drug mania to distinguish it from mania due to other causes. But at the same time several express an opinion that the symptoms are of shorter duration in hemp drug mania than in mania due to other causes. Besides this pretty generally accepted view that short duration is a diagnostic mark of hemp drug insanity, one or two witnesses are inclined to think that there are other characteristic symptoms. Dr. Cobb (Bengal witness No. 110) in his oral evidence states: "There is nothing very typical in the symptoms, but still ganja insanity has points of distinction from other kinds of insanity. It is very temporary. Confinement of the patient with removal of the exciting cause generally brings about rapid cure. Delirium is a prominent feature. There are other general features which it is difficult to put into words, and which experience alone can teach.....One recognizes ganja insanity intuitively. All the symptoms I have described may be present in other kinds of insanity, but one judges by the combination of them." Dr. Crombie (Bengal witness No. 104) in the appendix to his written evidence states: "I refer to the peculiar characters of this form

of toxic insanity by which it can be recognized just, or nearly as readily, as those of delirium tremens distinguish alcoholic intoxication. To enable me to do so clearly, it is necessary to distinguish between acute ganja intoxication due to a single debauch or to continuous excessive use of it in what might be called a bout of ganja drunkenness, and the effects of its continued immoderate use over a lengthened period of time. Acute ganja intoxication is marked by the extreme vehemence of the mania. In its mental, moral, and muscular manifestations, it bears no resemblance to alcoholic intoxication whatever. The maniac is excited in every fibre. His aspect is infuriated, his eye glares and is tense and glistening, while at the same time the conjunctiva is red and injected. He shouts, vociferates, sings, walks quickly up and down or round his cell, and shakes the door out of its fastenings. If at liberty, he is violent and aggressive, and may run *amok*. In other cases the mental disturbance is less marked, but the demeanour is excited, and he suddenly seizes some weapon, and slays one or more of the people in his neighbourhood without apparent reason. The attack is of short duration, being limited to a few days. Then there is perfect recovery, and the patient is oblivious of things which took place during the period of intoxication.....The insanity produced by the long-continued immoderate use of ganja has also features of its own. The patients are hilarious, attitudinise, and are full of the sense of well-being; they are as a rule good-natured and trustworthy, and recover in a large proportion of cases under confinement and deprivation of the drug. These cases characterize Indian asylums by the large number of happy amusing lunatics they contain. They are, however, very subject to relapses even after lengthened periods of freedom from symptoms."

The alleged shorter duration of hemp drug cases is to some extent borne out by the statistics obtained by comparing the accepted and rejected cases for 1892. In the accepted cases (98), after deducting the ten patients who were not insane on admission, the percentage of recoveries has amounted to 56·8 per cent. of the total admissions, while of the rejected cases only 32·4 per cent. of the admissions have recovered. The Commission consider, however, that too much stress should not be placed upon rapidity of recovery as a diagnostic sign in attempting to differentiate between hemp drug and ordinary mania. It is well recognized that as a rule ordinary uncomplicated cases of mania rapidly recover. Moreover, bearing in mind that hitherto hemp drug cases have been accepted as such as a rule on untrustworthy evidence, and that consequently many of the cases on which Superintendents of Asylums have based an opinion as to the relative rapidity of cure of hemp drug and ordinary mania were not actually toxic cases, "rapidity of recovery" can only be accepted tentatively as a means of discrimination. It is scarcely necessary to observe that this so called "diagnostic mark" has not been used in diagnosing hemp drug insanity in the asylums, as it has been shown that diagnosis was made on the admission of the patient and not after his recovery.

In connection with the alleged greater recoverability of cases of hemp drug mania, it may be of interest to quote statistics of cases in an English asylum. In the West Riding Asylum the percentage of recoveries in acute and simple mania were respectively 65·5 and 61 per cent., while 8·4 and 11·9 per cent. were relieved and 11·9 and 16 per cent. formed a chronic residue. Taking all maniacal forms in the same asylum (including the simple, acute, hysteric, chronic,

delusional, recurrent, and puerperal), the recoveries amounted to 53·2 per cent.: 14 per cent. were relieved, and 20·6 per cent. formed a chronic remainder. Obviously, however, these figures are not strictly comparable with the statistics of the hemp drugs and rejected cases with which the Commission have been dealing, because the Indian cases have only been a limited period under observation—under two years—while the West Riding Asylum statistics refer to periods of several years.

In considering the "peculiar characters" of hemp drug insanity as alluded to by Dr. Crombie, the Commission have to recall attention to the erroneous character of the statistics which form the basis of that officer's conclusions, and also to point out that generally all the features of the acute form as described by Dr. Crombie are comparable with the symptoms of transitory mania and the symptoms of the chronic form with those usually found in cases of mania unconnected with the use of hemp drugs. Indeed, Otto Von Schwatzer's description of transitory mania in the Dictionary of Psychological Medicine might be read in lieu of Dr. Crombie's "peculiar character" of the symptoms. "The principal characteristic of transitory mania is the spontaneous and ungovernable intense excitement produced by the cerebral irritation and the morbidly exaggerated motor impulse, which, however, does not consist, as in other and milder forms of frenzy, of a more or less harmless restlessness, but in a wild paroxysm with a blind desire of destruction. The excitement extends with great intensity over the whole of the motor sphere, so that not single muscles, but the whole muscular system, is under its influence. All the wild motor discharges are without any purpose and object ..... Every idea is at once expressed either by words or by inarticulate cries, screams, and shouts ..... lively and sparkling eyes, which protrude from the orbits, redness of the conjunctiva, threatening or staring look ..... As rapidly and suddenly as the attack comes, so suddenly it also disappears. Another abnormality of transitory mania is that its duration may be very much protracted, there being cases in which the attack lasted several days ..... Recollection generally reaches as far as the moment of outbreak, and perhaps includes darkness before the eyes, etc., but then completely ceases." The description of some of the symptoms usually found in cases of mania, as given by W. Bevan Lewis, is also fairly comparable with Dr. Crombie's account of the special features presented by cases of insanity produced by the long-continued immoderate use of ganja. "The excitant swell of feeling and the torrent of disconnected ideas may express themselves in continuous garrulity, in noisy chattering, in threatening and abusive tones, in laughter, in singing, or loud shouting with corresponding pantomime and almost ceaseless activity, or the feeling of unusual freedom and energy may find relief in destructive tendencies, smashing of glass, breaking of furniture, tearing of clothing, or, perhaps, in violent aggressiveness." In regard to these lunatics being "very subject to relapses," it may be remarked that this also is recognized as a common feature in ordinary cases of mania.

Summary of conclusions regarding hemp drug insanity.

536. Summing up the evidence as to the presence of pathognomonic symptoms in cases of hemp drug insanity, the Commission consider that, with the exception perhaps of the shorter duration of such cases when compared with cases of ordinary mania, there are no symptoms by which the cause of the mental condition can be determined.

The determination of cause depends wholly upon history. The Commission also consider it not improbable that there are no typical brain lesions peculiar to hemp drug insanity, though definite lesions are doubtless present in chronic cases, as they are in cases due to other causes.

In answering the question, therefore, on what the evidence rests that hemp drugs may induce mental aberration, the Commission would offer the following remarks: The evidence may be considered under two heads—(*a*) popular; (*b*) scientific. The popular idea that the use of hemp drugs may induce insanity can be traced back for many centuries, and the present day views on the subject are no doubt the outcome of old popular ideas which have been handed down and become concrete. With non-medical witnesses the mere use of the drug along with the fact of insanity, as the evidence shows, has as a rule been accepted as cause and effect. Of the large number of medical witnesses who have given evidence before the Commission, probably not a single one has ever observed the inception of the habit and the use giving rise to mental aberration, and been in a position to gauge the value of other contributory causes if present. With practically no modern literature on the subject, with no special knowledge apart from the popular idea, with a very slight or no clinical experience of insanity in England, with the experience derived from perhaps having had half a dozen insanes in the course of two years under observation as Civil Surgeons, officers have been placed in charge of asylums, and have had to differentiate between cases of hemp drug insanity and ordinary mania. The careful inquiry which has been made by the Commission into all the alleged hemp drugs cases admitted in one year into asylums in British India demonstrates conclusively that the usual mode of differentiating between hemp drug insanity and ordinary mania was in the highest degree uncertain, and therefore fallacious. Even after the inquiry which has been conducted, it cannot be denied that in some of the cases at least the connection between hemp drugs and insanity has not been conclusively established. But taking these accepted cases as a whole, we have a number of instances where the hemp drug habit has been so established in relation to the insanity that, admitting (as we must admit) that hemp drugs as intoxicants cause more or less of cerebral stimulation, it may be accepted as reasonably proved, in the absence of evidence of other cause, that hemp drugs do cause insanity.

The action of hemp resin, the active principle of all forms of the drug, when taken internally, has formed the subject of accurate experimental observations, and the physiological action of the drug on the human subject and animals is fairly well known. When, however, the products of the destructive distillation of the resin are inhaled, as in ganja smoking, the precise physiological effects induced have not hitherto been, so far as the Commission are aware, as fully studied. Dr. Russell's experiments (Bengal witness No. 105) already quoted are, the Commission understand, the only ones instituted on man with any pretensions to scientific accuracy. On the other hand, Assistant Surgeon Bocarro (Sind witness No. 20) and others refer from careful actual observations to the general physiological effects induced by smoking ganja and charas. With the object of elucidating the physiological effects of the products of the destructive distillation of hemp resin, Dr. D. D. Cunningham, F.R.S., Professor of Physiology, Medical College, Calcutta, at the request of the Commission, kindly undertook a

series of experiments on monkeys. A full account of the experiment with ganja is given in paragraph 483. Dr. Cunningham reports on naked-eye inspection that "the cerebro-spinal nervous centres were all apparently perfectly healthy." The results of the histological examination are not before the Commission, but it is hoped that they will be received in time to be included in the appendix. So far as the information from all sources before the Commission is concerned, there is no evidence of any brain lesions being directly caused by hemp drugs, as they have been found to be caused by alcohol and dhatura; and there is evidence that the coarse brain lesions produced by alcohol and dhatura are not produced by hemp drugs.

Cerebral stimulants.

537. The precise physiological effects induced by the inhalation of the products of the destructive distillation of hemp resin and those arising from the exhibition of the resin by the stomach are probably not identical, but in both cases there is ample evidence that the use of the drug in either form may first cause cerebral stimulation, and then depress the functional activity of the brain. François Franck and Pitre's experiments (Arch. de Physiol., 1883), quoted by Lauder Brunton, indicate that in the case of dogs the excitability of the brain is increased by the administration of *Cannabis*, a purified form of hemp resin, so that the tendency to epileptic convulsions is greatly increased, and may be induced by very much slighter stimuli than usual. Alcohol is a typical cerebral stimulant, and any drug which, like alcohol, increases the functional activity of the brain, may, like alcohol, give rise to what is technically known as "an intoxication." The effect of alcohol may result in three principal sets of symptoms, which are admirably set forth by Legrain (Dictionary of Psychological Medicine).

(*a*) Taken in large amounts, in a short time it produces acute symptoms, which are immediate, but temporary—*intoxication* or *drunkenness.*

(*b*) Alcohol if taken often and in great quantities, or if the drunkenness is nearly continuous, or if the individuals are not very strong in brain, accumulates in the organism without being at any time completely eliminated, and gives rise to acute symptoms of longer duration than mere intoxication—*delirium tremens.*

(*c*) Alcohol regularly or irregularly introduced into the system for a long time in doses even short of producing immediate symptoms is known to produce general disorders and progressive lesions, characterized by weakening of the faculties and premature dementia, the *ensemble* of the symptoms constituting *chronic alcoholism.*

The analogues of these chief effects of alcohol may also be traced in the symptoms induced by hemp drugs, in which we have—

(*a*) The condition of more or less delirium with hallucinations and merriment as occurring in a person who has taken what is to him a large dose of the drug, the symptoms being only temporary—*hemp drug intoxication.*

(*b*) The condition of wild frenzy, with symptoms of transitory mania occurring in a person who has systematically indulged largely in the drugs—*hemp drug delirium.*

(*c*) Cases in which the drug has been used for a considerable period, and then given rise to mania of shorter or longer duration, or cases in which the symptoms of hemp drug delirium do not completely subside, but pass on into a state of mania usually curable, and thus indicating the probable absence of anatomical lesions—*hemp drug mania.*

The evidence, though by no means clear and decisive, is perhaps sufficient to justify the presumption of an analogy such as is above indicated; and cases which have come before the Commission have seemed to divide themselves into these three classes. At the same time it must be pointed out that the sharp line of demarcation in symptoms which separates alcoholic intoxication from delirium tremens does not separate the intoxication and delirium produced by hemp drugs. Further, in regard to what has been said about hemp drug mania, it may be noted that it is not improbable, though it has not been established by evidence, that prolonged abuse of the drugs may give rise in some cases to definite brain lesions resulting in a progressive weakening of all the faculties leading to dementia.

Legrain's description of poisons of the mind.

538. Hemp drugs have been classed among the "poisons of the mind," and it may be of interest, as throwing a good deal of light on the whole subject and explaining the different modes in which "intoxications" may give rise to altered mental states, to allude briefly to the manner in which mental poisons are presumed to act. M. Legrain, in Hack Tuke's Dictionary of Psychological Medicine, defines mental poisons as including all substances, whatever may be their origin and nature, which are capable of exercising a marked action on the intellectual processes, either by disordering them or by suspending them completely for a moment or longer. He then goes on to describe their action at length in a passage which may be summarized as follows. Poisons of the mind act primarily to a greater or less extent on the cerebral cells. Almost all substances introduced into the organism modify the cerebral processes, this being due to the delicacy of the organization of the nervous system, which, like all complicated mechanism, is extremely vulnerable. The brain as the terminus of all sensations, and as the regulator of even the most minute cellular functions, has to bear the brunt of attacks, even the slightest, directed against the vital equilibrium, and has also to re-act in order to re-establish this equilibrium. In every intoxication, in addition to the cerebral re-action due to the effect of the poison itself, there are other re-actions requiring as many reflexes for the defence of the body, and closely connected with the impressions which the sensorium receives, of modifications of nutrition, or of changes which take place in other organs under the influence of the poison. These re-actions are the symptoms common to every intoxication. The cerebral re-actions which take place under the more direct influence of the toxic substance are of two kinds—they may be diffused, general, and undefined, and expressed by vague symptoms, indicating a lesion of the brain as a whole; or they are well-defined, clear, and localized, indicating that the poison affects one special centre of the brain to the exclusion of all others. Special derangements may also occur in addition to those of the brain. In spite of the great dissimilarity of the substances which are capable of producing cerebral intoxication, there are nevertheless certain clinical features common to all. We might even say that there are no intellectual disorders more pathognomonic of one poison than of another. The artificial insanity produced by toxic substances is nothing but the

re-action of the cerebrum, which is arrested in its full and regular function, and the coming into play of the cellular elements under the influence of an external and abnormal excitation which is different from the usual stimulation. As already pointed out, this excitation may affect one part of the brain more than another; hence the apparent difference in the symptoms, which may also vary in different individuals, although they are under the influence of the same poison. The toxic substance does not add any new element to those which the normal brain possesses, and herein lies the great difference between the superadded insanity and the insanity which the brain produces itself between toxic derangement and psychosis. All or nearly all slight intoxications, from whatever cause, are characterised by certain general symptoms—(1) excitation of the organ of thought; (2) intoxication; and (3) incoherence of ideas and actions. In organic derangement there is a qualitative ideational alteration; in toxic derangement there is only a functional disturbance, and a quantitative modification of psychical expression. The special symptoms are of infinite variety, and this variation of the special phenomena depends upon two factors—(*a*) the localization of the toxic effects in a special cell group in the brain; and (*b*) on individual re-action. Nervous and predisposed persons appear to be more easily affected than normal subjects. Certain toxic substances, such as alcohol and morphia, etc., do not produce the same effects on all individuals, male or female, under all latitudes. A large number of substances produce cerebral effects, but rarely in consequence of certain individual dispositions. Among labourers who handle carbon disulphide or aniline, some only present mental disorders. The individual factor with its idiosyncrasies plays here, as everywhere, a very important part. There are other factors, too, which have to be considered, the degree of education, reason, locality, dosage, and mode of preparation of the drug, all of which may modify the symptoms. Thus the hallucinations of the Western people under the influence of hashish are not identical with the voluptuous dreams of the Orientals. The simple intellectual disorders produced by various poisons are of two kinds—(1) the condition of excitement, and (2) the condition of depression; but these two conditions do not exclude each other. Thus in the case of hemp drugs, depression or narcosis usually follows the initial excitement. In addition to the intoxication and general disturbance of the mind, mental poisons produce also insane conditions or mental disorder. But these conditions are intimately connected with the general disturbance of the mind. The individual variations are here very numerous, the same poison producing different effects in two individuals. The insane conditions have been classed into several groups—(1) maniacal or incoherent type is the most frequent, the derangement being absolutely general; (2) alcoholic type, a maniacal condition of a depressive, painful, and frightful form; (3) maniacal type of expansive form, ambitious, mystic, and erotic ideas, idea of self-satisfaction and of exaggeration of personality—this form is considered as representative of hashish, etc.; (4) melancholic type; (5) mixed forms in which depression may alternate with excitement; and (6) vesaniæ conditions, *i.e.*, attacks of insanity, which, although excited by poisons, do not derive their special colour or character from the drug, but arise in persons strongly predisposed to insanity. Most poisons produce nothing but temporary disorders, which disappear without leaving any trace behind: their effect is limited to a slight excitement on depression of the faculties, to a short intoxication, or to a more or less profound narcosis; afterwards perfect order is re-established. Other poisons cause more serious symptoms. The duration of symptoms varies according to the individual disposition and the dose absorbed;

but, generally speaking, the acute stage, if recovery should follow, does not last more than a few days or weeks. In chronic voluntary intoxication the cause of the symptoms depends necessarily on the habits of the patient and the individual re-action. The chronic period does not generally establish itself from the first. There are first the acute phenomena, which may reproduce themselves a number of times, without, however, preventing chronicity from establishing itself: these acute symptoms are nothing but epiphenomena, which appear again and again in the course of this period: the two essential kinds of symptoms, however, are the irresistible appetite for the poison, with periodical return of the acute and sub-acute symptoms, and the progressive decay of the mental faculties. The acute symptoms correspond to the temporary saturation of the body with the poison, while the chronic symptoms are the expression of definite anatomical lesions in the brain gradually developed under toxic influence. The prolonged use of mind poisons thus gives rise to progressive weakening of all the faculties passing over into dementia. Acute toxic insanity is a secondary insanity: it is polymorphous; all forms of insanity may be observed, not only in two different intoxications, but even in the course of one and the same intoxication. It is temporary, nothing but a momentary acute effervescence terminating with the elimination of the poison.

Intoxication and insanity.

539. Before leaving the subject of insanity, there is one point to which it seems desirable briefly to allude. The impression left on the minds of the Commission by the perusal of a large number of records in criminal cases and by the examination of some asylum cases is that there is occasionally seen a tendency to confound intoxication and insanity in connection with hemp drugs. The result is that in some cases men who should have been simply punished for being intoxicated have been sent to the asylum, and, though sane when they reached that institution, have been detained there. These cases are, however, much rarer than they used to be, if one may judge from the old asylum reports. A more serious result of this confusion is that there are cases in which men who have committed offences, especially crimes of violence, under the influence of hemp drugs have been acquitted on the ground of insanity, although the circumstances have been such that had the intoxicant been alcohol, they would have been convicted. It is undoubtedly more difficult in the case of ganja than in the case of alcohol to recognize the line drawn for social and legal purposes between intoxication and insanity. But the difficulty is not insuperable. The main reason for the confusion that has existed is probably the ignorance that has prevailed regarding hemp drugs. When they are recognised as a common intoxicant, it is to be hoped that the practice of the Courts will be freed from the occasional blemishes above indicated. It is not expedient, nor is it just, that intoxication from hemp drugs should secure immunity from punishment which is not allowed to alcohol; and, on the other hand, the Commission cannot concur with Dr. Walsh (Bengal witness No. 112) when he says: "It is not my opinion from experience that it is either dreadful in itself or possibly disastrous to a man's mind to have to herd for years with lunatics, though sane."

CHAPTER XIII.

EFFECTS—MORAL: GENERAL SUMMARY OF CONCLUSIONS.

Social effects.

540. Hitherto the effects of hemp drugs have been considered principally with reference to consumers themselves. In turning now to the discussion of their moral effects, we shall practically consider briefly their direct effects on society. Are consumers offensive to their neighbours; and is there any connection between hemp drugs and crime? These are the questions which it is proposed now to discuss. A considerable mass of evidence has been collected on these questions.

Are consumers offensive to their neighbours?

541. As to whether moderate consumers are offensive to their neighbours the evidence can leave little doubt on the mind of any one who peruses it carefully. About seven hundred witnesses have thought it worth while to speak on this point. It may be safely presumed that of the remainder the great majority have no experience of anything offensive in consumers. Of those who have given their opinions, over six hundred say that moderate consumers are not offensive to their neighbours. Of the small minority, some object, not unnaturally, to the bad example they think their ganja smoking neighbour may be to their sons who are growing up. Some merely take offence at the smell of the ganja smoke, and some at the "coughing and expectorating." They are evidently not inclined to be tolerant of the indulgence which they do not care themselves to practise. On the other hand, some of the minority are clearly dealing not with moderate consumption, but with the worst type of excess. They speak vaguely of the consumers as committing the gravest crimes under the influence of these drugs. Altogether it is clear that the moderate consumer is as a rule perfectly inoffensive. There appear to be quite adequate grounds for accepting the statement of those who assert that as a rule he "cannot be distinguished from the total abstainer." Some witnesses have stated that they had difficulty in finding the moderate consumers, though they did find that the habit of moderate consumption is common. Indeed, there are not wanting those who say that no consumer of bhang or ganja, whether in moderation or in excess, is ever an offensive neighbour. The contrast in this respect between the excessive consumer of hemp drugs and the excessive consumer of alcohol is frequently emphasized. No doubt the excessive consumer of hemp drugs must sometimes be a disagreeable and perhaps even dangerous neighbour; but even among excessive consumers such cases seem to be very rare indeed.

Connection of hemp drugs with crime.

542. In discussing the connection of hemp drugs with crime, it is necessary to discriminate between any effect which they may be supposed to produce on crime in general and the unpremeditated crimes of violence to which intoxication may give rise. Thus there are those who allege that the habitual use of alcohol, at all events if carried to excess, degrades the mind and character of the consumer and predisposes him to crime in general, or to crimes of a particular character, especially to offences against property. Drink is thus set down sometimes as one of the most efficient agencies for increasing the criminal classes. On the other hand, there are well known cases in which intoxication from alcohol has led to crimes of an occasional and exceptional character, generally to unpremeditated crimes of

violence or other unpremeditated offences against the person. These two classes of cases should be carefully distinguished and treated separately.

Bad characters.

543. The first question then is whether any large proportion of bad characters are habitual consumers of hemp drugs, and whether there is any general connection between such consumption and crime. About one-half of the witnesses have dealt with this question. Of these, a majority of two to one hold that no large proportion of bad characters are moderate consumers. A majority, but not quite so large, have the same opinion regarding excessive consumers. In respect to the second part of the question, a majority of eight to one hnld that moderate consumption of these drugs has no connection with crime in general or with crimes of any particular character. A majority of nearly four to one hold the same view in regard to excessive consumption. There is one witness who makes rather a suggestive observation in this connection. He says that consumers "are called badmashes for this reason only, that our children may fear them and avoid their company." This undoubtedly suggests an explanation of some part of the popular condemnation of the drugs. A very large proportion of the natives of this country have a strong aversion to the use of intoxicants, and may reasonably be expected to influence their children against them in precisely this way. This may lead some witnesses to take an exaggerated view of the number of bad characters who are consumers. But there need be no hesitation in accepting the view that this number is indeed larger in proportion than the number of consumers among the general population. Consumers of hemp drugs are found more among the lower orders, among the poor, than among the more wealthy. The former are, of course, the classes to which the badmashes or bad characters belong. This is the explanation given by many witnesses of the alleged fact that proportionately more consumers of hemp drugs, and especially ganja smokers, are to be found among bad characters than among the whole population. But the general opinion is that hemp drugs have *per se* no necessary connection with crime. It is true that some witnesses assert that habitual consumers sometimes spend more than their poverty renders reasonably possible, and are then tempted to commit petty thefts. And there are probably many Magistrates of experience who have in "bad livelihood cases" heard the police enlarge on the amount believed to be spent on hemp drugs and other intoxicants and the apparent impossibility of meeting this expenditure honestly. The same is true, however, of any unwise expenditure beyond what one can afford, and of any extravagance which intensifies poverty.

Do criminals fortify themselves with these drugs?

544. Another question which arises in reference to the connection between hemp drugs and crime is whether these drugs are to any considerable extent taken by criminals to fortify themselves to commit premeditated crime of any kind. About one-half of the witnesses speak on this point. Of these a majority of nine to four answer in the negative. The truth seems to be that as hemp drugs help the consumer to endure great fatigue or exposure and stimulate him to unwonted exertion, criminals, like any other consumers of these drugs, go to them for that assistance when they feel that they require it. This is just as any man under similar circumstances might go to the intoxicant he was in the habit of using. Sometimes, no doubt, also a criminal may take his own particular

intoxicant to supply Dutch courage. But it seems just as common with him to desire to keep his head clear, and therefore to avoid all intoxicants. No man, of course, who was not unaccustomed to the use of hemp drugs would turn to them for any of these purposes. There would be too great a risk of the unaccustomed intoxicant disabling rather than nerving the man. There is one class frequently mentioned in some parts of the country by whom the drugs are no doubt used, *viz.*, "lathials" or professional clubmen, who are employed occasionally as mercenaries in riots and assaults. These men, like many wrestlers, use the drug habitually, and no doubt indulge in it before going out on their work.

Do criminals administer them to their victims?

545. About the same number of witnesses deal with the question whether criminals use hemp drugs to stupefy their victims. By a majority of about three to two, they answer this question in the affirmative. The question arises whether complete or sufficient stupefaction can be induced by the administration of these drugs. There seems to be considerable doubt on this point. It is a very general opinion that only persons unaccustomed to the drugs could be rendered insensible by them, and such persons would not take the drugs. No doubt ganja might be administered in a *chillum* with the pretence that there was nothing there but the tobacco with which it was mixed. But this as a rule would involve too much risk. Ganja would be too readily detected by smell and flavour. Many even of those who believe that hemp drugs could produce sufficient stupefaction speak also to the admixture as a general rule of more potent drugs, such as dhatura. As to cases, it is far easier to get many established cases of such stupefaction by dhatura alone than to get one where hemp drugs were clearly the narcotic employed. There are two special instances of this kind of use of hemp drugs mentioned by some witnesses, *viz.*, thefts of ornaments from prostitutes intoxicated with bhang, and thefts of ornaments from children stupefied by majum sweetmeats. These, however, do not appear to be common. It is difficult to get instances of any such use of these drugs. The evidence in support of the view that they are so used is largely hearsay and based on mere rumour. On the whole, it is very improbable that the drugs are much used in this way; for dhatura, a much more potent drug, is more easily available and more easily administered.

Evidence that excessive consumption is not connected with unpremeditated crimes, especially crimes of violence.

546. There seems, therefore, good reason for believing that the connection between hemp drugs and ordinary crime is very slight indeed. There remains for discussion their alleged connection with unpremeditated crime, especially crimes of violence. In this connection it seemed only necessary to consider the excessive use of the drugs. This, then, was the question put before the witnesses, whether excessive indulgence in any of these drugs incites to unpremeditated crime, and whether they knew cases in which it had led to temporary homicidal frenzy. This question has been discussed by nearly six hundred witnesses, of whom a majority of very nearly three to two answer in the negative. They do not believe in any such connection. Their experience has not brought before them cases in which that connection seemed to exist. Some of them have clear recollection of crime being associated by causation with alcohol, but cannot recall any case in which it was similarly associated with hemp drugs. They will not go beyond their experience, and therefore they answer in the negative.

Some of them go further than this. They go so far as to say that these drugs not only do not incite to crime, but have the very opposite tendency. They are of opinion that the drugs "tend to make men quiet;" that "the immediate effect is stupefying; there is none of that tendency to violence which is a characteristic of alcoholic intoxication;" and that the result of continued abuse of the drugs is to make a man "timid and unlikely to commit crime." These last statements cannot be accepted as generally true. No doubt the drugs may sometimes have these sedative effects, though a number of witnesses speak to habitual use producing irritability. Any one who has extensively visited ganja shops or places where consumers congregate must be struck with the perfect quiet which prevails in the great majority, and with the slothful, easy attitude of the consumers. These are not, however, the invariable effects of hemp drugs. Undoubtedly the excessive use does in some cases make the consumer violent. It is probably safe to say in view of all the evidence that the tendency of the drugs often seems to be to develop or bring into play the natural disposition of the consumer, to emphasize his characteristic peculiarities, or to assist him in obtaining what he sets his mind on. If he aims at ease and rest and is let alone, he will be quiet and restful; but if he is naturally excitable and ill-tempered, or if he is disturbed and crossed, he may be violent. This may be accepted perhaps as generally true if allowance be specially made for the fact that excess in the use of these drugs tends to show and to develop inherent weakness of character. At the same time the fact that so many witnesses testify to the peaceable and orderly character of the excessive consumers goes far to prove that in this country experience shows that as a rule these drugs do not tend to crime and violence.

Evidence to the contrary.

547. This impression is intensified by the consideration of the statements made by some of the witnesses who constitute the minority. Mr. D. R. Lyall (Bengal witness No. 1), who has had thirty-two years' varied experience as a Revenue Officer and Magistrate, says: "I have known cases of temporary homicidal frenzy;" but in his oral examination he says: "I can give no examples to illustrate my answer." This is precisely the position occupied by many of the most experienced witnesses. They have a more or less vague impression that hemp drugs and violent crime have been occasionally associated, but they cannot recall cases. A few testify to having searched the criminal records or police reports for years back in vain. As Mr. Westmacott (Bengal witness No. 2) says in his written paper: "I do not at this moment remember a case, but I have an impression that there are such cases." This is a witness typical of a class.

There are other witnesses who speak less cautiously of "many cases," but cannot give information about any. Thus Mr. Williams (Bengal witness No. 18) speaks of "innumerable cases of homicidal frenzy." But his remark "is merely based on newspapers;" and he knows only one case which occurred at Calcutta while he was at Darbhanga, and of which his knowledge is "entirely hearsay." Similarly, Mr. W. C. Taylor (Bengal witness No. 36), an uncovenanted officer of forty-seven years' experience, speaks of "numerous cases," but can only recall one—surely a doubtful case—in which an attack was made on a party, of which he was a member, by a Sonthal in the Sonthal rebellion of 1856. Similarly, the Inspector-General of Police in the Central Provinces

states that "running *amok* is always the result of excessive indulgence" in hemp drugs; but under cross-examination he says: "I have never had experience of such a case. I only state what I have heard." These witnesses also are typical of a considerable class, who refer to hearsay, to rumour, and to newspapers as the basis of their opinion.

Many others, like Mr. Cooke, Commissioner of Orissa (Bengal witness No. 8), base their opinion on what they have heard of the history of criminal lunatics in asylums, and really speak only of acts of violence due to mania. One witness exposes this fallacy very simply: "I have never seen any instance of unpremeditated crime committed by a consumer, except that mad men sometimes grow violent." Such cases are clearly irrelevant to the question immediately under discussion. But there are a good number of witnesses who thus confound cases of violence occurring in the course of established insanity with unpremeditated crime incited by drugs. Instances are thus given of acts of violence committed in the asylum where the lunatic is confined. Some witnesses are even content to quote the fact of mania characterized by violence without any particular offence being committed as establishing this alleged connection between hemp drugs and violent crime.

Some witnesses again base their opinion on a purely casual connection between the use of the drugs and the commission of crime. Thus Mr. Hugh Fraser (North-Western Provinces witness No. 8) spoke in his written paper of many crimes "committed under the influence of ganja." In his oral examination he asked that the word "while" should be inserted; and added: "I do not attribute the crime to the consumption of the drug. I cannot recall the details of any of these cases." This is certainly very different from the impression which his written answer conveyed. A Bengal witness goes even further in this direction. He says: "I know of two cases in which two ganja smokers committed murders, one for gain, and the other in heat of provocation."

There is another class of witnesses who do not profess at all to require any basis of fact for their opinion. They speculate on the probabilities. They are content to reply that hemp drugs "weaken the brain and may lead to crime," or "I can imagine their doing so in the same way as excess of alcohol in an individual of a naturally violent temperament, but not in a peaceful subject."

Cases referred to.

548. All this tends greatly to lessen the weight of the evidence in support of the affirmative answer to this question, and to strengthen the impression that it is but rarely that excessive indulgence in hemp drugs can be credited with inciting to crime or leading to homicidal frenzy. All witnesses have been asked whether they know of cases of homicidal frenzy. The cases quoted are, however, very few. They have all been carefully considered by the Commission. As already stated, a few witnesses have mentioned cases which are admittedly mere outbreaks of established insanity. These cases are excluded. Two Punjab cases mentioned by Colonel Tucker (witness No. 28) and Mr. C. Brown (witness No. 29), in which Ghazis and Kukas are stated merely to have fortified themselves by bhang for a fanatical attack on their enemies, have also been excluded. Finally, four cases which occurred beyond British territory in feudatory states have also been excluded. With these exceptions, all the cases mentioned by witnesses answering question 53 have been abstracted and compiled in a tabular form in Vol. III Appendices.

They are divided into two classes—*viz.*, (i) those cases of which the records have not been called for; and (ii) those cases of which the records have been examined by the Commission. In every case in which the records have been examined, a note containing the result of that examination has been appended to the evidence of the witness who referred to the case. The number of the witness entered in the statement contained in the appendix will facilitate reference to the particular note dealing with the case.

Cases in which the record has not been called for.

549. There are 58 cases belonging to the first class and 23 cases of the second. This gives a total of 81 cases mentioned for the whole of India. Taking first the fifty-eight cases constituting class (i), it is interesting to notice that out of such of these cases as have dates assigned, no fewer than eleven are over twenty years old. One European witness has to go back to 1856 before he can find in his long experience any case of violence attributable to hemp drugs, and two native witnesses recall instances over forty years old. This serves to show that these cases are drawn from a long period of years as well as from the whole of India. It is also interesting to notice that seventeen of these cases are attributed to sepoys and armed police, to whom great temptation to violence presents itself when they are suddenly or seriously provoked. Ten other cases are attributed to persons of the fakir or religious mendicant class. The following sentences from Mr. Maconachie's judgment in the case shown as No. 71 on the list are of interest in this connection: "Accused was at the time excited with bhang; and even now at his trial he has a daring and violent manner, which shows plainly his disposition. He is one of those roaming fakirs who, when they get excited by their favourite potations of bhang or charas, are utterly lawless, and are fit to be treated as enemies of society."

Deducting these twenty-seven cases, there remain only thirty-one of this class adduced as evidence of the effect which hemp drugs have on the people generally in leading to violent and unpremeditated crime. These cases cannot be very fully examined, as the Commission have not had the records before them. But the statements of the cases by the witnesses themselves show that several are merely cases of the rowdyism of intoxication; that there are several where the motive for the crime is quite adequate without looking to hemp drugs; and that there are not a few that have been put down to hemp drugs for no other reason than that the offender was a consumer. In one case the witness has held it sufficient to say that the man was under the influence of some drug.

Cases in which the records were examined.

550. The Commission called for the records in twenty-three cases in which the records were clearly traceable and easily obtainable. These cases were selected at haphazard simply on this ground. An abstract of what the records contain in each case will be found appended to the evidence of the witness quoting it. The examination of these cases tends greatly to weaken the force of the impression, even such as it is, created by the perusal of the cases of the first class. They may now be briefly discussed in detail. In case No. 59 a police officer informed the Commission that a ganja smoker suddenly murdered a vendor because he would not give him more of the drug. The facts were that the man had his knife in his hand as he was eating fruit; that in an altercation with the vendor the latter first dealt him a

blow with a split bamboo; and that the other then turned on him with his knife. The principal circumstances of the case and the real provocation are lost sight of by the witness. This case cannot be regarded as due to hemp drugs. This witness, second case (No. 60), is defective in a somewhat similar manner, inasmuch as he fails to point out that the man sought to murder his wife because she had given evidence against him. This is unfortunately too often found to be an adequate explanation of such a crime as this. Though the man was a ganja smoker, there is no proof that he was under the influence of the drug at the time. There is no mention of ganja in the record.

The next witness is Dr. Crombie, who is a member of the Committee for advising Government about criminal lunatics. He stated that he was unable, however, to give specific cases, but had one case clearly in his mind. This case he had also quoted before the Opium Commission as a case of running *amok* from ganja. He stated the case thus: "A Bengali babu, as the result of a single debauch, in an attack of ganja mania slew seven of his nearest relatives in bed during the night." A perusal of the records indicates that this statement of the case is wholly inaccurate. There is indeed mention of the man having used both ganja and opium. But there is no mention of a debauch, and there is mention of habit. So that the conception of "a single debauch" is quite opposed to the history contained in the records. The judicial record shows that the man had been for years peculiar in his behaviour; that about six years before he had become quite mad for a time on his wife's death; that on the present occasion a similar outbreak of madness had occurred on his mother's death; that he "did not take ganja during this time;" that the murders were committed on the night of his mother's *Shradh*, about which there had been "a commotion" during the day; and that the motive seemed to be mere insane despair as to how these members of the family could be cared for in the future. The asylum papers indeed mention "his mother's death as well as addiction to ganja and opium" as the cause of insanity. But the papers afford no clue as to the origin of Dr. Crombie's view of the case.

The next five cases are three mentioned by Mr. Marindin (Collector, Bengal) and two by Mr. Dalrymple Clark (District Superintendent of Police, Assam). These witnesses did not profess a detailed knowledge of these cases, but merely suggested that the records should be consulted as the cases seemed to be such as the Commission desired to see. But the records show that no satisfactory connection between hemp drugs and crime was established in any of these cases.

Dr. Mullane, a Civil Surgeon in Assam, mentions two cases in which he thinks the crime was associated with ganja. The first (No. 67) is a case in which a religious mendicant murdered a guest in the middle of the night. Under these circumstances it is impossible to say with anything like confidence what really occurred. But the evidence does point to the crime having been committed under the influence of ganja. In his second case (No. 68), however, Dr. Mullane is incorrect in his facts. The man did wound some people; he apparently did not kill any one. He never took ganja, though he took liquor and opium. The Judge found that he was not under the influence of any intoxicant at the time of the offence.

Mr. Moran, an Assam Tea Planter, gives the next case (No. 69). It is instructive to note that though the case occurred on his own estate, and he was

a witness at the trial, Mr. Moran's memory does not serve him well in regard to the facts. His present account of it differs most materially from that given at the time. The record is clearly against any connection between the crime and ganja, which Mr. Moran did not then mention at all. The only remaining Assam case (No. 70) seems from the papers to have been clearly a liquor case, and in no way connected with hemp drugs.

The two Punjab cases seem both to illustrate the connection between hemp drugs and crime. The first (No. 71) has been already quoted as indicating the character of the fakirs to whom so many of these cases of violent crime are attributed. The second (No. 72) is a very interesting case. The records showing the efforts which have been made by the Punjab Government to make the Khosa tribe give up the excessive use of intoxicants well repay perusal. If these tribesmen can be persuaded to see the evil effects which have resulted from this excess and to abjure the drugs they use without turning to others, the Government will deserve congratulations on the results of a somewhat exceptional line of action.

The next case (No. 73) is given by Colonel Chrystie, a Deputy Inspector-General of Police in Madras, and is referred to by several other witnesses. A peon having been fined is said in his irritation to have taken a considerable amount of ganja, and to have then rushed out with a club. He struck a boy, and then ran along the public road until he met an old man whom he beat to death, alleging afterwards that he had killed a black pig. The connection between the crime and ganja was accepted by the courts at the time; but doubt is cast on this case by the fact that this man was afterwards found to be subject to recurrent insanity, several violent outbreaks of which were manifestly independent of any drug. This is one of the accepted cases for 1892 in the Madras Asylum.

The next three cases (Nos. 74 to 76) were referred to by Mr. Stokes, a Madras Collector, as having been mentioned to him by a Police Inspector as ganja cases. But a perusal of the records shows that there is no adequate reason for connecting these murders with hemp drugs. The last Madras case (No. 77) is a strange one. A father first cruelly burned his child; and, when the child cried, it occurred to the father as it was a feast day to offer the child to the god. He did so, killing the child and lapping up the blood. There was evidence that the man was under the influence of ganja (bhang) which he had smoked. The High Court adopted this view and sentenced him to transportation for life.

The next case (No. 78) is one in which certain Talavias organized a riot in the town of Broach, in the course of which Mr. Prescott, District Superintendent of Police, was killed. Mr. Cappel, the Collector, gives a full account of the details of this disturbance, and shows that it cannot be reasonably connected with hemp drugs.

The next two cases were mentioned by Mr. Sinclair, Collector of Thana. The first (No. 79) is the case of a servant who is alleged to have attempted to throttle his master's wife as she was sleeping by her husband at night. He is said to have been under the influence of ganja, and the records bear out this

view. In the second case (No. 80), Mr. Sinclair seems to be doubly mistaken. In the first place, the Magistrate acquitted the accused because it was not proved that he had committed the acts constituting the alleged offence, and, in the second place, the man's insanity was attributed to other causes than ganja.

The last case (No. 81) was given by Colonel Humfrey, Inspector-General of Police, Bombay. Colonel Humfrey was engaged in the arrest of the sepoy in this case; yet his recollection of the facts was not quite accurate, and led him to make the connection between the crime and bhang closer than it really was. He did not, however, actually attribute the crime to the drug. The judgment of the High Court is very clear, and shows that the murderous use of his rifle by this sepoy was deliberately planned, was due to revengeful feelings against the policeman, and was not due to the influence of bhang.

Results of the examination of these cases.

551. Of these twenty-three cases then, the records in not less than eighteen show that the crimes cannot be connected with hemp drugs. There is one case on which doubt is thrown by subsequent discoveries. The connection between hemp drugs and crime is only established in the remaining four. It is astonishing to find how defective and misleading are the recollections which many witnesses retain even of cases with which they have had special opportunities of being well acquainted. It is instructive to see how preconceived notions based on rumour and tradition tend to preserve the impression of certain particulars, while the impressions of far more important features of the case are completely forgotten. In some cases these preconceived notions seem to prevail to distort the incident altogether and to create a picture in the mind of the witness quite different from the recorded facts. Some of the witnesses whose memories have thus failed them are men who might have been expected to be careful and accurate. Their failure must tend to increase the distrust with which similar evidence, which there has been no opportunity of testing, must be received.

Summary of conclusions regarding effects.

552. The Commission have now examined all the evidence before them regarding the effects attributed to hemp drugs. It will be well to summarize briefly the conclusions to which they come. It has been clearly established that the occasional use of hemp in moderate doses may be beneficial; but this use may be regarded as medicinal in character. It is rather to the popular and common use of the drugs that the Commission will now confine their attention. It is convenient to consider the effects separately as affecting the physical, mental, or moral nature. In regard to the physical effects, the Commission have come to the conclusion that the moderate use of hemp drugs is practically attended by no evil results at all. There may be exceptional cases in which, owing to idiosyncracies of constitution, the drugs in even moderate use may be injurious. There is probably nothing the use of which may not possibly be injurious in cases of exceptional intolerance. There are also many cases where in tracts with a specially malarious climate, or in circumstances of hard work and exposure, the people attribute beneficial effects to the habitual moderate use of these drugs; and there is evidence to show that the popular impression may have some basis in fact. Speaking generally, the Commission are of opinion that the moderate use of hemp drugs appears to cause no appreciable physical injury of any kind. The excessive use does cause injury. As in the case of other intoxicants, excessive use tends to weaken the constitution and to render the consumer more susceptible to disease. In respect to the particular diseases which according to a considerable number of witnesses

should be associated directly with hemp drugs, it appears to be reasonably established that the excessive use of these drugs does not cause asthma; that it may indirectly cause dysentery by weakening the constitution as above indicated; and that it may cause bronchitis mainly through the action of the inhaled smoke on the bronchial tubes.

In respect to the alleged mental effects of the drugs, the Commission have come to the conclusion that the moderate use of hemp drugs produces no injurious effects on the mind. It may indeed be accepted that in the case of specially marked neurotic diathesis, even the moderate use may produce mental injury. For the slightest mental stimulation or excitement may have that effect in such cases. But putting aside these quite exceptional cases, the moderate use of these drugs produces no mental injury. It is otherwise with the excessive use. Excessive use indicates and intensifies mental instability. It tends to weaken the mind. It may even lead to insanity. It has been said by Dr. Blanford that "two factors only are necessary for the causation of insanity, which are complementary, heredity, and stress. Both enter into every case: the stronger the influence of one factor, the less of the other factor is requisite to produce the result. Insanity, therefore, needs for its production a certain instability of nerve tissue and the incidence of a certain disturbance." It appears that the excessive use of hemp drugs may, especially in cases where there is any weakness or hereditary predisposition, induce insanity. It has been shown that the effect of hemp drugs in this respect has hitherto been greatly exaggerated, but that they do sometimes produce insanity seems beyond question.

In regard to the moral effects of the drugs, the Commission are of opinion that their moderate use produces no moral injury whatever. There is no adequate ground for believing that it injuriously affects the character of the consumer. Excessive consumption, on the other hand, both indicates and intensifies moral weakness or depravity. Manifest excess leads directly to loss of self-respect, and thus to moral degradation. In respect to his relations with society, however, even the excessive consumer of hemp drugs is ordinarily inoffensive. His excesses may indeed bring him to degraded poverty which may lead him to dishonest practices; and occasionally, but apparently very rarely indeed, excessive indulgence in hemp drugs may lead to violent crime. But for all practical purposes it may be laid down that there is little or no connection between the use of hemp drugs and crime.

Viewing the subject generally, it may be added that the moderate use of these drugs is the rule, and that the excessive use is comparatively exceptional. The moderate use practically produces no ill effects. In all but the most exceptional cases, the injury from habitual moderate use is not appreciable. The excessive use may certainly be accepted as very injurious, though it must be admitted that in many excessive consumers the injury is not clearly marked. The injury done by the excessive use is, however, confined almost exclusively to the consumer himself; the effect on society is rarely appreciable. It has been the most striking feature in this inquiry to find how little the effects of hemp drugs have obtruded themselves on observation. The large number of witnesses of all classes who professed never to have seen these effects, the vague statements made by many who professed to have observed them, the very few witnesses who could so recall a case as to give any definite account of it, and the manner in which a large proportion of these cases broke down on the first attempt to examine them, are facts which combine to show most clearly how little injury society has hitherto sustained from hemp drugs.

CHAPTER XIV.

THE POLICY OF HEMP DRUG ADMINISTRATION.

553. The question of prohibiting the growth of the hemp plant and the sale of ganja and allied drugs is one which stands in the forefront of the present inquiry. It has been remarked by a well known historian* that "no laws are of any service which are above the working level of public morality, and the deeper they are carried down into life, the larger become the opportunities of evasion." If these words are true as applied to England under a feudal system, they are much more true in the present day as applied to British India. The Government of this country has not grown out of the forces contained within it, but has been superimposed upon them, and the paternal system of government which may have been suitable in England during the sixteenth century, and in the initial development of some Indian provinces during the period immediately following their annexation, becomes purely visionary when public opinion is in process of formation and the needs of the people are year by year finding more ready expression. Occasionally, no doubt, the Legislature in India has anticipated a standard of morality not universally accepted by the people, as in the case of laws relating to infanticide or the burning of Hindu widows; but these measures were passed under an overwhelming sense of the necessity of correcting popular notions of morality in matters coming well within the sphere of Government, and in the assurance that in the course of time they could not fail to secure the assent of all intelligent members of the community. In the chapter of Mill's Political Economy which treats of the non-interference principle, a distinction is made between two kinds of intervention by the Government—the one authoritative interference, and the other giving advice or promulgating information. And the following remarks are made regarding the former: "It is evident, even at first sight, that the authoritative form of Government intervention has a much more limited sphere of legitimate action than the other. It requires a much stronger necessity to justify it in any case, while there are large departments of human life from which it must be unreservedly and imperiously excluded. Whatever theory we adopt respecting the foundation of the social union, and under whatever political institutions we live, there is a circle around every individual human being which no Government, be it that of one, or of few, or of the many, ought to be permitted to overstep: there is a part of the life of every person who has come to years of discretion within which the individuality of that person ought to reign uncontrolled either by any other individual or by the public collectively. That there is, or ought to be, some space in human existence thus entrenched around no one who professes the smallest regard to human freedom or dignity will call in question: the point to be determined is where the limit should be placed; how large a province of human life this reserved territory should include. I apprehend that it ought to include all that part which concerns only the life, whether inward or outward, of the individual, and does not affect the interests of others, or affects them only through the moral influence of example. With respect to the domain of the inward consciousness, the thoughts and feelings, and as much of external conduct

General principles regarding sumptuary laws and their application to India.

* J. A. Froude's History of England, 2nd Edition, Chapter I, page 57.

as is personal only, involving no consequences, none at least of a painful or injurious kind, to other people, I hold that it is allowable in all, and in the more thoughtful and cultivated often a duty, to assert and promulgate with all the force they are capable of their opinion of what is good or bad, admirable or contemptible, but not to compel others to conform to that opinion, whether the force used is that of extra legal coercion, or exerts itself by means of the law. Even in those portions of conduct which do affect the interests of others, the onus of making out a case always lies on the defenders of legal prohibitions. It is not merely a constructive or presumptive injury to others which will justify the interference of law with individual freedom. To be prevented from what one is inclined to, or from acting contrary to one's own judgment of what is desirable, is not only always irksome, but always tends, *pro tanto*, to starve the development of some portion of the bodily or mental faculties, either sensitive or active; and, unless the conscience of the individual goes freely with the legal restraint, it partakes, either in a great or in a small degree, of the degradation of slavery. Scarcely any degree of utility short of absolute necessity will justify a prohibitory regulation, unless it can also be made to recommend itself to the general conscience; unless persons of ordinary good intentions either believe already, or can be induced to believe, that the thing prohibited is a thing which they ought not to wish to do." These remarks have been given at length, because the Commission believe that they contain a clear exposition of the principles which should guide them in deciding whether the prohibition of the hemp drugs should be authoritatively enforced by Government.

The question of entirely suppressing all intoxicants.

554. Now, a certain number of persons (among whom may in all probability be reckoned the mover of the question in the House of Commons which led to the appointment of the Indian Hemp Drugs Commission) deem it to be the duty of the British Government to suppress the trade in all intoxicants in all the countries under its sway; and there are no doubt special circumstances in India which render it less impossible than in some other countries to consider even so drastic a policy. These are notably the general sobriety of its races and the feeling, popular as well as religious, which prevails against their use among a large section of the community. Even then no appeal in support of such a measure can be made to the public morality or practice of civilised nations at large, nor, so far as the Commission are aware, to any marked success attending the experiment in particular instances. In the exceptional cases in which the experiment has been attended with partial success (as in some of the American States), the reformation of the habit has become an object of desire to the majority of the people, and the enactment for promoting such reformation has presented itself less as a restrictive force than as an auxiliary agency.

Not laid before the Commission.

555. But the Commission are not called upon to pronounce on so wide an issue. It was not upon the basis of this general principle that the Secretary of State for India accepted the proposal made in the House of Commons, nor do the instructions issued to the Commission by the Government of India cover so wide a field. The question of prohibiting the production and sale of the hemp drugs in India has to be considered by the Commission apart from the general question, and such prohibition must be justified, if at all, on some more special ground than the mere fact that they are intoxicants.

556. Again, there are a certain number of persons whose evidence before the Commission points to the assumption that the case for prohibition of the hemp drugs has already been established in the records of the Government, and that further enquiry implies a wilful blindness to what has been abundantly proved by such records. A reference to Chapter XII of this Report will show how untrustworthy these records are in regard to the production of insanity by the use of the drugs—an aspect of the question which is of the utmost importance, and has formed the basis of nearly all the official opinion heretofore recorded against such use. And, after availing themselves fully of every opportunity of consulting the official literature on the subject, the Commission have arrived at the conclusion that it shows little originality, and that a very limited amount of personal observation has been made to do duty as the basis of large conclusions. The want of reliable data has been compensated by annual reiteration until the stamp of antiquity has secured for the opinions so expressed a large amount of acquiescence among officials who had neither the time nor the opportunity to examine the matter for themselves. So far, therefore, as the effects of the hemp drugs are concerned, the Commission have had to approach the subject as almost a *tabula rasa*, and, while availing themselves of the imperfect data previously collected, have endeavoured to avoid accepting any conclusions without a substantial foundation of well ascertained facts. The attitude, however, of the Government in regard to the question may be briefly described. So far back as 1798 an inquiry was made in Bengal regarding the quality of ten intoxicating articles—"opium, madak, ganja, subzi, bhang, majum, banker, charas, tobacco, and toddy—" with a view to determining whether it might not be advisable to prohibit altogether the sale of any of them. The conclusion arrived at, which was stated in a letter of the Board to the Governor-General in Council, No. 22, dated 29th May 1798, was to the following effect: "It appears that the original productions are as follows: Tobacco, opium, ganja, subzi or bhang, banker, and toddy, and that the three remaining articles are for the most part compositions of those here recited, as above mentioned. With respect to the drugs specified in the foregoing schedule, they are not for the most part represented as producing any very violent or dangerous effects of intoxication except when taken to excess; and, although the operation of them may be more powerful in their compound state, we apprehend it would be difficult to sanction the sale of the original productions, and to prohibit with effect the use of compositions of which they are susceptible; to which may be added that most of these articles, both as original productions and as artificial combinations, appear to be useful either in medicine or otherwise; for these reasons we do not deem it necessary to recommend that the sale of any of them be altogether prohibited, but shall proceed to state what appear to us the best means of restraining the use of them, and improving the revenue by the imposition of such taxes as are best adapted to the nature of the case."

The past history of the case how far to be relied upon.

A complete inquiry was made in 1871 from all provinces as to the effects of the several preparations of hemp; and if the result should call for any action in the direction of restricting them by enhancement of the duty or of limiting, or even prohibiting, the cultivation of the plant, the advice of the Local Governments was invited as to the expediency and practicability of such measures. The result is contained in the Resolution of the Government of India, Finance Department, No. 3773, dated 17th December 1873. The following passage shows the conclusion

arrived at: "Upon a consideration of all the opinions thus collected, it does not appear to the Governor-General in Council to be specially proved that hemp incites to crime more than other drugs or than spirits. And there is some evidence to show that on rare occasions this drug, usually so noxious, may be usefully taken. There can, however, be no doubt that its habitual use does tend to produce insanity. The total number of cases of insanity is small in proportion to the population, and not large even in proportion to the number of ganja smokers; but of the cases of insanity produced by the excessive use of drugs or spirits, by far the largest number must be attributed to the abuse of hemp. In Lower Bengal the circumstances have admitted of a system under which the consumption of ganja has been reduced one-half, while the amount of duty levied on it has been doubled. It would be very desirable to control the cultivation and preparation of ganja and bhang elsewhere in the same way. But it is believed that this would not be easy; indeed, it would probably be impracticable. Moreover, with the exception of the Chief Commissioners of British Burma and the Central Provinces, the Local Governments are not in favour of altering existing arrangements. His Excellency in Council, however, trusts that the various Local Governments and Administrations will endeavour, wherever it may be possible, to discourage the consumption of ganja and bhang by placing restrictions on their cultivation, preparation, and retail, and imposing on their use as high a rate of duty as can be levied without inducing illicit practices. As regards British Burma, the Chief Commissioner has already been informed that the Governor-General in Council concurs with him in thinking that the cultivation and consumption of ganja should be absolutely prohibited, and it has been prohibited from the beginning of the year 1873-74."

In 1877 the Bengal Government appointed a special officer, Babu Hem Chunder Kerr, to make a full inquiry into the details of the cultivation of ganja, the sufficiency or otherwise of the present safeguards, and the reforms which it might be advisable to introduce. Sir Ashley Eden's conclusions on this officer's report in regard to the effects of ganja and policy to be followed were as follows: "The Lieutenant-Governor has himself no doubt that the use of ganja in any form is injurious to the consumer, and that it is the duty of Government to make the tax on this article as high as it can possibly bear. Unfortunately it is habitually used by large numbers of the lower classes of the population, who would, if deprived of it altogether, apparently find in the leaves of the wild hemp plant and in other drugs narcotics and stimulants of equally deleterious character. It does not seem possible, therefore, to stop the cultivation altogether. The policy of Government must be to limit its production and sale by a high rate of duty without placing the drug entirely beyond the reach of those who will insist upon having it."

The last important utterance on the subject previous to the appointment of the Commission is contained in the letter of the Government of India, Finance Department, to Her Majesty's Secretary of State, No. 212, dated 9th August 1892, in which the following remarks occur: "We are inclined to believe that ganja is the most noxious of all intoxicants now commonly used in India. But even if the absolute prohibition of the use of the drug could be enforced, the result might be to induce the use of still more noxious drugs. India abounds with plants growing wild from which drugs can be procured which are more deleterious in their effects than ganja. One such

plant is the dhatura (*Stramonium*), the seeds of which are already used to intensify the narcotic effects of bhang, a liquid preparation of hemp leaves; and we apprehend that if the use of ganja were suppressed altogether, dhatura might be largely resorted to by the poorer classes as a means of satisfying their craving for stimulants. Apart, however, from the objections just mentioned, we believe that it would be impossible to enforce in India a prohibition of the use of ganja. That drug is produced in Native States, and the difficulties in the way of preventing its import from them, if the supply in British India were cut off, would be immense. It would not, moreover, be possible to suppress the supply in British India. The hemp plant grows readily in India, in many places wild without cultivation of any kind, and it would be easy for any one addicted to the use of ganja to grow a plant or two in the enclosure of his own house and in nooks and corners which would be safe from observation and from the risk of detection. The question in the House of Commons suggests that as the possession and sale of ganja has been prohibited for many years in Burma, it is desirable that the same prohibition should be extended to other provinces of British India. The analogy of Burma does not, however, apply to India. When the prohibition was enforced in Burma, the drug was very little used by the Native Burmese, its consumption being almost entirely confined to coolies and other immigrants from India; and the cultivation of the plant in Burma, which had never been extensive, had virtually ceased, the consumers being dependent on importations for their supplies. In India, on the other hand, the practice of ganja smoking has existed from time immemorial, and among certain sects of Hindus, ascetics, and religious mendicants hemp intoxication is habitually indulged in; and, as explained in the preceding paragraph, it would be impossible to suppress the growth of the plant. But, although we consider it impracticable to enforce the absolute prohibition of the use of ganja, we fully recognise it as our duty to restrict its consumption as far as practicable, and we have distinctly laid down the policy to be pursued in respect of this drug in our Resolution of the 17th December 1873 already quoted. The annual reports of Excise Administration show that the subject has since been continually before Local Governments, who are making every possible endeavour to minimise the evils and discourage the use of the drug wherever it is a source of danger to consumers."

Thus "restraining the use and improving the revenue by the imposition of suitable taxation," "discouraging the consumption by placing restrictions on the cultivation, preparation, and retail, and imposing on their use as high a rate of duty as can be levied without inducing illicit practices," "limiting the production and sale by a high rate of duty without placing the drug entirely beyond the reach of those who will insist upon having it," "restricting consumption as far as practicable, minimising the evils, and discouraging the use of the drug wherever it is a source of danger to consumers" have from time to time been the watch-words of the Government in the matter of the hemp drugs, a policy only once definitely abandoned, *viz.*, in the case of Burma, where total prohibition was introduced in 1873.

Prohibition in other countries.

557. Allusion must be made to precedents for the prohibition of the hemp drugs in other countries in order to complete these general observations. Excepting British Burma (reference to which will be made further on), the Commission only know of four cases of pro-

hibition, *viz.*, in Turkey, Egypt, Greece, and Trinidad. For the first three of these, the only information at the disposal of the Commission is contained in the communications from Her Majesty's representatives addressed to the Secretary of State for Foreign Affairs in 1892 in consequence of a requisition made on them by the Earl of Rosebery at the request of Mr. W. S. Caine, M.P.

Turkey.

558. The ground of the prohibition in Turkey is thus stated in a note addressed by the Grand Vizir to the Ministry of Commerce, Constantinople, on 1st March 1292 (*sic*): "From the reports furnished by the Imperial Medical Council, it appeared that the use of hashish in the preparation of medicines was extremely rare, and that, being a narcotic, its use must of necessity be injurious, and that consequently the suppression of the cultivation of hashish could not fail to prove highly advantageous." The effect of the prohibition is thus described in an enclosure to the Ambassador's reply: "The importation and sale in Turkey of hashish, though contraband, is still, I hear, largely carried on, and is used for smoking, in the composition of various sweetmeats, and as an opiate in general."

Egypt.

559. In Egypt the cultivation, use, and importation of hashish were first forbidden in 1868, but in 1874 it was allowed to be imported on payment of duty. In November 1877 an order was received from Constantinople that all hashish brought into Egypt was to be seized and destroyed, and finally, in March 1879, the importation and cultivation of hashish were prohibited by a Khedivial decree. In March 1884 it was provided that confiscated hashish should be sold by the Customs (for delivery abroad) instead of being destroyed as formerly, and the proceeds of the sale divided amongst the informers and officers who took part in the seizure. "This measure was rendered necessary," says Mr. Caillard, the Director-General of the Customs, "by the absence of any fund from which rewards could be distributed; while, on the other hand, the profits of smuggling being very great, large sums were paid by the smugglers to insure the silence or complicity of the Customs officers, coastguards-men, and others. A considerable number of persons are employed in the smuggling trade, many of them having no other means of subsistence. Great ingenuity is displayed by the smugglers in this illicit trade, and no sooner has one trick been discovered than another is invented. The great obstacle, however, to the complete repression of the contraband trade is the refusal of some of the European Governments to recognize the right of the Egyptian Government to search suspected shops or warehouses, and to punish the delinquents by fine as well as confiscation. ..... In view of the impossibility of suppressing the contraband trade in hashish under the circumstances described above, I suggested to the Minister of Finance the desirability of removing the prohibition against the importation of the drug, and I proposed to collect a customs duty of P. T. 100 per kilogramme (9*s.* 3*d.* per lb.), besides a license-tax on the sale of the hashish. It has been abundantly proved that the vice of hashish smoking cannot be suppressed by legislation, whereas by a system of licenses it may be kept under control to some extent." Mr. Caillard estimates that the quantity of hashish consumed annually in Egypt cannot be less than 50,000 okes (about lbs. 140,000) notwithstanding the prohibition. He states that the hashish appears to be manufactured chiefly in Greece.

560. In Greece there is no law regulating or specially alluding to the production, manufacture, or export of hashish. The sale of it as merchandise is allowed, but a Police order of 1891 prohibits its sale and consumption in the small cafés of Athens and the Pirœus, in some of which, during the previous ten or fifteen years apparently, the habit of using this drug had been gradually introduced. The order was based upon a report of the Sanitary Board at Athens, in which prominent mention is made of the observations made in India by English doctors, and the statistics of insanity in Bengal lunatic asylums ascribed to the use of the hemp drugs are put forward as justifying repressive measures. The effect of the order passed is not mentioned, sufficient time not having elapsed.

Greece.

561. As regards Trinidad, the Commission are not sure that the hemp drugs are prohibited. The fact has been stated by the Indian Immigrants Commission, Natal, 1885-87,* and by Dr. Thomas Ireland, Government Medical Officer, British Guiana, in a paper published in the *Alienist and Neurologist*, St. Louis, in October 1893. But, on the other hand, Surgeon-Major Comins, lately on special duty in British and Foreign Colonies and the Netherlands, in his Note on Emigration from India to Trinidad, 1893, quotes a statement of the Protector of Immigrants, who says that in the year 1885 an Ordinance was passed requiring the payment of £100 per acre to obtain a license to grow ganja, which had previously been grown in large quantities. This practically put a stop to the growth and consumption for several years, but immigrants who had left Trinidad two years previous to the writing of his report had been growing it in Venezuela, and several seizures had been made by the Customs officers from persons endeavouring to introduce it into Trinidad. The Protector adds: "With a coast line such as ours, adjacent to that of the Spanish Main, it will be impossible to prevent its introduction into this colony if immigrants who go there continue to grow it." Dr. Comins himself says: "I do not know what are the laws in force here regarding the sale of opium and ganja."

Trinidad.

562. Thus in the case of other countries, where the use of the drugs has been prohibited, the Commission do not find in the literature available to them many arguments for prohibition. In Turkey it rests upon the theory accepted by orthodox Muhammadans that hashish "being a narcotic its use must of necessity be injurious," while in Egypt the prohibition emanated from Turkey. In both these countries the measure has by no means been attended with complete success. In Greece the prohibition in the cafés of Athens is based largely upon Indian experience, which the Commission have had cause in great measure to recast. In Trinidad, if there has been prohibition, it does not seem of late to have been effectual. It must be added that the Commission have no scientific information regarding the strength of the article of commerce called hashish, and it may differ to some extent from the Indian products. From the description of its manufacture given by the Mayor of Orchomenus in Mantinea in Arcadia, whence the Egyptian supply is mainly derived, it appears to resemble more the charas of Yarkand than the ganja or bhang of India.

Basis of prohibition and results in these countries.

563. Starting, therefore, from the position that what is known of the hemp drugs in the past is not sufficient to justify their prohibition in India, and that for such a measure there must be strong justification based on ascertained facts scientifically and

Is prohibition in India justifiable, feasible, and advisable?

* Report, Chapter II, paragraph 9.

systematically examined, the first question for the Commission to decide is whether such justification is to be found in the evidence before them, and the second whether, if this is so, prohibition is feasible and advisable on other grounds. These will now be considered.

Prohibition of bhang.

564 The effects of the hemp drugs have been treated in Chapters X to XIII of the Report; and as the first result of these conclusions, the Commission are prepared to state that the suppression of the use of bhang would be totally unjustifiable. It is established to their satisfaction that this use is very ancient, and that it has some religious sanction among a large body of Hindus; that it enters into their social customs; that it is almost without exception harmless in moderation, and perhaps in some cases beneficial; that the abuse of it is not so harmful as the abuse of alcohol; that its suppression, involving the extirpation of the wild hemp plant, would in some tracts be a matter of great difficulty; that such a measure would be extremely unpopular, and would give rise to widespread discontent; and, finally, that, if successfully accomplished, it would lead to the use of more hurtful stimulants. The Commission deem it unnecessary to traverse the evidence further than has been done in the preceding chapters of this report in support of these propositions. It is almost unanimous in regard to them. The utmost that is necessary in regard to this product is that it should be brought under more effective control, and this matter will be dealt with further on. But absolute prohibition is, in the opinion of the Commission, entirely out of the question.

Prohibition of ganja and charas.

565. Though it has been shown that as a rule ganja and charas are used in moderation, and that the moderate use ordinarily does not cause appreciable injury, yet it has been established that the excessive use of these forms of hemp drugs has been more injurious than in the case of bhang. Whether they should be prohibited or merely controlled is a question which might be settled merely with reference to their ascertained effects. The Commission consider that the effects are not such as to call for prohibition, and on the general principles discussed in the opening paragraphs of this chapter, such interference would be unjustifiable. Nevertheless, it seems advisable to refer to the other evidence with a view to ascertaining the generally prevailing views on the subject, and considering the grounds on which prohibition is advocated or opposed.

The evidence regarding prohibition of ganja and charas may be considered together.

566. In reviewing the evidence on these points, it will not be necessary to draw a distinction between ganja and charas. The effects of these two drugs have been shown to be similar, though charas is *cæteris paribus* the more potent. They are both ordinarily smoked, though very occasionally used for eating and drinking usually in the form of admixtures with other condiments. As stated by Mr. Lyall (Bengal 1): "Ganja and charas are really one, and in time, if the question be scientifically followed up, possibly charas will be the only form used." The refuse of ganja is used in some provinces as bhang, but this substance more nearly resembles bhang than ganja properly so called. The ganja of the different provinces varies in quality. But these distinctions cannot here be specially observed; it will be sufficient to bear in mind that the opinions in Bengal, the Central Provinces, Madras, Bombay, and the smaller Administrations relate to ganja; that those in the Punjab relate to charas; and that those in the

North-Western Provinces and Sind relate to ganja and charas, both of which are consumed.

Supply of ganja and charas in its relation to prohibition.

567. A few remarks, however, recapitulating the local conditions of ganja and charas will not be out of place. Charas is practically a foreign article. Small amounts are imported from Nepal and Gwalior, but they may be left out of the account. The bulk comes from Yarkand through the Himalayan passes, or to a much smaller degree from other parts of Central Asia through the routes on the frontier of Afghanistan. It would not be a very difficult matter to stop these imports, though the co-operation of the Kashmir Darbar would be necessary in regard to Yarkand charas. It may, therefore, be accepted that the supply of charas might be cut off without much difficulty, though, as this article forms the principal import from Yarkand, the prohibition of charas would paralyse, if not extinguish, the trade with this country. In regard to ganja, the problem is more complex. Ganja is regularly cultivated in Bengal, the Central Provinces, Madras, Bombay, and Berar. In Bengal and the Central Provinces, the cultivation of the hemp plant for its production is under complete control. In Berar cultivation is only permitted under license. In the other tracts of British territory it is not directly controlled. Assuming that control is possible in these tracts, it does not follow that it would be equally possible to prevent cultivation altogether. Moreover, there still remains a considerable amount of production in many of the Native States all over India. To induce these States to prohibit cultivation would be a difficult matter, and, even if this were done, the suppression of illicit cultivation would offer the most serious difficulties. For, though ganja of good quality requires some cultivation and tending, the evidence before the Commission tends to establish the fact that ganja of an inferior kind can be manufactured from the spontaneous or casual growth which is found near human habitations and amidst cultivation of other crops in many parts of India. While, therefore, it cannot be asserted that the task of preventing the manufacture of ganja is an impossible one, it would certainly at the present time be attended with considerable difficulty.

Opinions of the witnesses regarding prohibition of ganja and charas.

568. The question addressed to the witnesses regarding the prohibition of the hemp drugs (No. 35) was so framed as to elicit in the first place opinions as to the feasibility of such a measure. The considerations bearing upon the subject were also set forth in the form of subsidiary questions. The question whether the witnesses advocated prohibition was not specifically put, but it is not difficult, comparing the answers to the questions above mentioned with those relating to other questions, to decide what the opinion of each witness is on this question. Those who hold decided views have no doubt generally stated them in some portion of their answers, and at all events ample opportunity of doing so was afforded them. A larger number of the witnesses have contented themselves with merely giving an affirmative or negative answer to the questions on the subject. It is impossible to attach much importance to such answers. The Commission have abstracted them and considered them, but they feel bound to give far more weight to the opinions of witnesses whose replies show that they have formulated an opinion on the desirability of prohibition. Some account will now be given of these answers.

569. Out of the total of 1,193 witnesses, 575 have expressed a decided opinion on the question of prohibition. Of these only 99 advocate it in their answers. The remainder are against it. The classification of these witnesses is shown in the following table :—

Opinions regarding prohibition of ganja and charas.

Province.	Superior Civil Officers.		Superior Medical Officers.		Subordinate Civil Officers.		Subordinate Medical Officers and Medical Practitioners.		Non-officials.		Total.	
	For.	Against.	For.	Against.	For.	Against.	For.	Against.	For.	Against.	For.	Against.
Bengal	...	29	...	9	1	36	4	8	9	62	14	144
Assam	...	4	1	1	...	1	...	1	4	8	5	15
North-Western Provinces...	...	13	...	1	6	29	9	10	18	26	33	79
Punjab	3	10	...	1	3	8	2	3	10	14	18	36
Central Provinces ...	..	9	1	2	1	18	1	1	...	24	3	54
Madras	...	21	1	5	1	12	1	11	8	18	11	67
Bombay and Sind ...	...	19	1	1	3	26	4	7	1	16	9	69
Berar, Ajmere, Coorg, and Quetta-Pishin.	...	1	...	...	1	8	3	1	2	2	6	12
Total	3	106	4	20	16	138	24	42	52	170	99	476
Per cent. ...	3	97	17	83	10	90	36	64	24	76	17	83

Thus, not only is there a very large preponderance of opinion against prohibition, but the preponderance is specially marked among superior Civil officers. The only witnesses indeed of the latter class who favour prohibition are three in the Punjab, where charas and not ganja is consumed.

The most important of these opinions on either side will now be specified. The most forcible opinions in favour of prohibition will be quoted at some length in order that the argument for this view may be thoroughly appreciated. The opinions against prohibition are too numerous to be quoted, but the witnesses will be named under headings setting forth the most prominent views expressed.

570. The Bengal witnesses in favour of prohibition of ganja consist of a Sub-Deputy Collector, an Assistant Surgeon, two Medical Practitioners, an Honorary Magistrate, two zamindars, two pleaders, a delegate from the Indian Relief Society, Calcutta, the Secretary to the Band of Hope, Faridpur, the Secretary to the Bogra Medical Society, and two Missionaries. The Commission cannot find much to quote from these opinions, but the following are the most forcible :—

Bengal opinions in favour of prohibition of ganja.

(238) Delegate, Indian Relief Society, Calcutta, Babu Amrita Krishna Mullick, B.A., B.L.: After quoting official and medical opinions relating to the injuriousness of ganja, the Society endeavours to show that the cultivators of the hemp plant lose largely by their occupation, and maintains that it is the duty of the Government to come to their rescue by abolishing it. The Society maintains

that the privation to the consumers would not be serious, and that it is difficult to suggest any drug more deleterious than ganja to which they could take. The Society contends that the alleged religious sanction to the use of the drugs is a fallacy, and refers to the opinions of several pandits in support of this view. The Society argues that to meet the deficit in the revenue, which would be about 24 lakhs per annum, the salaries of European officers should be cut down, the duties on cotton goods re-imposed, and the income-tax increased with an enhanced taxable minimum. Savings would be effected by reduction of establishment and by decreased cost of lunatic asylums.

(236) Secretary, Band of Hope Temperance Society, Faridpur, Babu Purna Chandra Maitra: "This Society begs to urge upon the Commission to consider the justice and propriety of a just, benign, and Christian Government to allow cultivation and sale of a drug which has been excluded from some countries, and in England doubly protected in the poison list." The witness argues that the drug "has been unreservedly condemned by eminent doctors as one of the most dangerous poisons known, as the most potent cause of lunacy, and as the most pernicious and deleterious of all excitants ever in use in any country." He admits that there are a number of jogis, sanyasis, fakirs, and mendicants addicted to ganja smoking, but states that ganja smoking forms no part of their religion, and there is not a single Hindu or Muhammadan religious book which sanctions the use of ganja. "No real disaffection can under the benign rule of the British Government be seriously apprehended, and, even in the event of there being such apprehension, the fact should not be lost sight of that the Government in this case will have the support of the bulk of the population." He alleges that ganja produces crime, and that the taxation, amounting to 22 lakhs, is a drain on the poverty-stricken and half-famished people of Bengal. He finds it difficult to suggest a substitute for ganja, but liquor may be one, and a peculiar preparation of strong tobacco may also serve the purpose.

(134) Secretary to Bogra Medical Society (10 members), Pyari Sanker Dass Gupta, L. M. S.: "The prohibition will give rise to no political danger. For the ganja smokers have very little influence over society. The Government has faced questions of a greater religious character, as the Suttee or the Age of Consent Act, with boldness. This is comparatively a minor question affecting only depraved men."

(203) Rev. W. B. Phillips, Missionary.: "What with liquor and opium and hemp drugs of various kinds, all licensed by Government, it does seem as if the population were terribly exposed to degrading influences. It is not my province to face the difficult task of dealing with these evils; and I sincerely sympathize with the Government in the heavy duty of solving the grave problems involved. But I do feel it my duty to set forth as strongly as possible the assurance that very much mischief is being worked in the country by the various intoxicants so freely and largely sold. I hardly care to distinguish between opium, alcohol, and ganja. I regard them all as bad. My mind is so impressed with the evil effects of excessive use that I do not care to consider the moderate use. I would wish Government to begin with ganja, to proceed with little delay against opium, and then tackle alcohol. I prefer this as a matter of policy, as ganja is easiest dealt with. I am prepared to prohibit all three intoxicants on account of the evil which I see done by them."

(81) Kali Das Mukerji, Sub-Deputy Collector: After advocating prohibition of ganja on the grounds of the evil effects, and stating that there would be no danger from the discontent caused owing to the small number of the consumers, the witness proceeds: "The reasons usually put forward in favour of ganja consumption are as follows: (1) that Hindu friars and jogis cannot do without it, for it helps them in their religious contemplation, and sustains them under severe exertion and exposure; (2) that it is a safeguard against disease in malarious tracts; and (3) that it serves the labouring classes as a refreshing stimulant, alleviating fatigue. I do not think that any of these reasons is conclusive, though plausible. In fact, none of them stands the test of close examination. If any intoxicating drug is at all necessary for friars and jogis, alcohol, opium, or siddhi may serve the purpose. Eight kinds of intoxicating drugs are prescribed in the Tantras for Hindu devotees, and it is optional with them to take any if they care to do so at all..... That ganja is a safeguard against disease in malarious tracts is not necessarily true..... Even as a stimulant and remover of fatigue, ganja has very little to recommend it to the labouring classes..... A careful observation is sure to establish the fact that any ordinary labourer whose only stimulant is tobacco is on the whole a better workman than his ganja consuming brother."

Opinions against prohibition of ganja in Bengal.

571. It is impossible to quote the mass of opinion against prohibition of ganja, but the following analysis of some of the most important opinions will give an idea of the strength of these opinions:—

(1) Prohibition impossible or unnecessary, or could not be enforced without a large preventive establishment.

(1) Hon'ble D. R. Lyall, C.S.I., Member, Board of Revenue.

(2) Mr. Westmacott, Commissioner.

(9) Mr. Price, Collector.

(11) Mr. Skrine, Collector.

(21) Mr. Jenkins, Collector.

(17) Mr. Gupta, Commissioner of Excise.

(46) Ganendra Nath Pal, Deputy Collector.

(197) Mr. H. M. Weatherall, Manager, Nawab's Estates, Tippera.

(2) Prohibition would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger.

(1) Hon'ble D. R. Lyall, C.S.I., Member, Board of Revenue.

(3) Mr. Westmacott, Commissioner.

(19) Mr. Manisty, Collector.

(18) Mr. Hare, Collector.

(16) Mr. Marindin, Collector.

(32) Mr. Bedford, Deputy Commissioner.

(63) Abhilas Chandra Mukharji, Deputy Collector.

(62) Kanti Bhushan Sen, Deputy Collector of Excise.

(163) Maharaja Bahadur Sir Jotendra Mohan Tagore, K.C.S.I.

(174) Radhika Churn Sen, Zamindar.

(175) Raghonandan Parsad, Zamindar.

(185) Jogendra Krishna Rai Chaudhri.

(207) Purnendu Narayan Sinha.

(208) Mahendra Chandra Mitra, Chairman, Naihati Municipality.

(92) Mr. Ricketts, Manager, Nilgiri State.

(217) Biprodas Banarji, Pleader, Newspaper Editor, and Chairman, Baraset Municipality.

(250) District Board, Monghyr.

(228) Jadubans Sahai, Vice-Chairman, Arrah Municipality.

(3) *Prohibition might lead to the use of dhatura or other intoxicants worse than ganja.*

(21) Mr. Jenkins, Collector.

(46) Ganendra Nath Pal, Deputy Collector.

(62) Kanti Bhushan Sen, Deputy Collector of Excise.

(161) Maharaja Girijnath, Roy Bahadur.

(164) Raja Surja Kanta Acharjya, Bahadur.

(167) Radha Balav Chaudhri, Rai Bahadur.

(233) Secretary, Rajshahi Association.

(217) Biprodas Banarji, Pleader, &c.

572. The opinions in favour of prohibition of ganja in Assam are those of a Civil Surgeon, the Secretary to the Tezpur Raiyats Association, the Secretary to the Upper Assam Association, a merchant, and a pensioned Overseer, Public Works Department, and member of a Local Board. There is nothing especially to note in these opinions.

Assam.
Opinions in favour of prohibition of ganja.

573. Against prohibition we have the Commissioner of the Assam Valley, the Commissioner of Excise, the Director of Land Records and Agriculture, an Officiating Deputy Commissioner, a Civil Surgeon, an Extra Assistant Commissioner, a medical practitioner, four pleaders, and four planters.

Opinion against.

Mr. Driberg, Commissioner of Excise, says: "It would be useless to prohibit the use of ganja in a province like Assam, surrounded as it is by independent hill people, who would cultivate it in their hills and smuggle it down with little risk of detection. Any prohibition will only lead to the increase of illicit consumption and to the secret use of the drug, which would be decidedly bad; of course, stop cultivation in Bengal, and the prohibition of the use of excise ganja could be enforced; but there would be serious discontent, though in this province

it might not amount to a political danger, and the prohibition would be followed by recourse to opium, and in some cases to alcohol." The evidence of planters tends generally to show that the use of ganja by the garden coolies, who (except in the western districts of the Assam Valley and those of the Surma Valley, all of which border on Bengal) are the principal consumers, produces no serious effects. There is nothing in any of the Assam evidence to controvert these views.

North-Western Provinces.

Opinions in favour of prohibition of ganja and charas.

574. The advocates of prohibition of ganja and charas in the North-Western Provinces are as follows: 6 subordinate civil officers, 9 subordinate medical officers and private medical practitioners, and 18 non-officials. But few of these witnesses give any reasons for their opinions. And the Commission are not able to quote any one of them as having any special weight. The only opinion which it appears worth while to quote is that of a Collector (Mr. Addis (4)), who does not, however, specifically recommend prohibition. He says: "It probably would be feasible to prohibit the use of all these drugs. Public opinion is against their use, and the people are very obedient to authority. The prohibition would certainly lead to the increased use of opium and alcohol."

Opinions against prohibition.

575. On the other hand, the opinions against prohibition are very strong. The following is an analysis of some of the most important:—

(1) Prohibition impossible or unnecessary, or could not be enforced without a large preventive establishment.

(1) Hon'ble A. Cadell, Member, Board of Revenue.

(6) Mr. Stoker, Commissioner of Excise.

(12) Mr. Brownrigg, Officiating Deputy Commissioner.

(20) Mr. Partridge, Officiating Deputy Commissioner.

(9) Mr. Jackson, Collector.

(10) Mr. Tweedy, Collector.

(17) Mr. Spencer, Officiating Collector.

(34) Mr. Cockburn, Assistant Sub-Deputy Opium Agent.

(32) Mr. Robarts, Joint Magistrate.

(26) Rama Shankar, Assistant Collector.

(24) Mr. Rogers, Assistant Commissioner.

(191) Kanwar Kundan Singh, Zamindar.

(2) Prohibition would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger.

(12) Mr. Brownrigg, Officiating Deputy Commissioner.

(9) Mr. Jackson, Collector.

(10) Mr. Tweedy, Collector.

(34) Mr. Cockburn, Assistant Sub-Deputy Opium Agent.

(21) Mr. Gillan, Assistant Collector.

(26) Rama Shankar, Assistant Collector.

(46) Pandit Bishambar Nath, Deputy Collector.

(28) Mr. Bruce, Assistant Collector.

(33) Pandit Sri Lall, Officiating Joint Magistrate.

(185) Kewal Ram, Zamindar.

(220) Mr. Finch, Planter.

(190) Bas Deo Sahai, Zamindar.

(227) Syad Mahammad Nuh, Zamindar.

(3) Prohibition might lead to use of dhatura or other intoxicants worse than ganja or charas.

(6) Mr. Stoker, Commissioner of Excise.

(15) Mr. Ferard, Collector.

(28) Mr. Bruce, Assistant Collector.

(51) Thakur Tukman Singh, Deputy Collector.

Punjab.

Opinions for prohibition of charas.

576. The advocates of the prohibition of charas in the Punjab are as follows:—3 superior civil officers, 3 subordinate civil officers, 2 subordinate medical officers, and 10 non-officials.

It may be noted that *Mr. Ogilvie, Financial Commissioner in charge of Excise (2)*, records the following opinion: "I am inclined to hold the opinion, though I am not quite satisfied on the subject, that the use of charas is so deleterious that it might be permissible, both on grounds of morality and utility, for its use to be prohibited or for the price of the drug to be so artificially raised as to confine its consumption to a very small number indeed. The reason why I say that I am not quite satisfied on the point is because I have not sufficiently investigated the facts. All that I can, therefore, say with certainty is that my opinion tends to the direction above indicated..... I would observe, however, with regard to the Yarkand trade that the imposition of a duty so high as to be practically prohibitive would very considerably injure that trade, because the Yarkand trader in exchange for the charas takes back the products of the Punjab to his own country or to Kashmir. The extinction or serious injury of the Yarkand trade would, of course, be a very regrettable circumstance. On the other hand, from my personal knowledge as Deputy Commissioner of the Dera Ismail Khan District, I would say no harm would accrue to general trade on the western border from the prohibition of charas."

Mr. Coldstream, Deputy Commissioner (5), though he does not seem to have formed a definite opinion regarding the moderate use of the drugs, says: "The *gradual* stoppage of import of ganja and charas might be tried. It is not as yet a very widely-spread habit, but it might grow. It would cause great pain and discontent if the prohibition were sudden and comprehensive, but this would not amount to political danger. A prohibitory measure regarding ganja and charas would no doubt be followed at once by a recourse to opium and alcohol.

I can quite believe the moderate occasional use of the drugs may be comparatively harmless, but I am not aware that they are commonly used occasionally and in moderation. They may, however, be so used for all I know."

Mr. Wilson, Deputy Commissioner (14), says that he should like to see the experiment made in selected districts of prohibiting trade in charas (and bhang) altogether. As regards charas, he thinks the prohibition would be feasible, as it is imported, and the discontent would be insignificant. He knows of no class, such as labourers, who take the drug in moderation as an ordinary stimulant. Among fakirs and other excessive consumers, he thinks the use produces great evils, and that there is no more harmful drug which they are likely to take to. He does not know anything of the use of dhatura except its administration as a poison. He thinks sudden prohibition would be cruel. He would therefore begin by taxation and gradually raise it, leaving the question of total prohibition to be decided by experience.

The evidence of *Arjan Singh, Extra Assistant Commissioner (19)*, is much to the same effect, but he states that the use of dhatura is general among the followers of Siva at the Shivratri in the Dera Ghazi Khan district. He says it is taken in very small quantities, so that its effect is almost imperceptible.

General Millet (69), formerly District Superintendent of Police, would like to see all intoxicants prohibited which cannot be proved to be actually necessary. He thinks gradual prohibition of the hemp drugs feasible, and that educated, intelligent native public opinion, which to a great extent leads that of the lower classes, would support prohibition. Discontent at first among the degraded classes would be inevitable, but there would be no political danger, though tact and discretion would be needed and calm-minded European officials at the helm. He fears that recourse to alcohol would be the result.

Shekh Riaz Husain, zamindar (67), thinks that "having regard for the welfare and good of the people which the British Government has in view, the prohibition of the hemp drugs (including bhang) is imperatively necessary. Loyal and intelligent subjects and well-wishers of the country would welcome the prohibition, though the unscrupulous habitual consumers would indeed dislike it. But as it would be for the good of the people, it is not hoped that any class of persons would resent it. The enforcement of the prohibition should be effected like other new laws and regulations, exceptions being made to some extent in the case of the existing old habitual consumers, because its sudden stoppage would cause them serious privation. The discontent resulting would not amount to a political danger. If it were possible to make charas as expensive as alcohol, that would be one way of dealing with the subject."

Sardar Sujan Singh, Rai Bahadur, Contractor (59), considers charas as certainly most injurious, and thinks its use should most certainly be prohibited. It does no good to anybody. There are not many *kahars* who take it. Those who do, go to the bad. He does not know of the use of dhatura as an intoxicant. The use of madak and chandu is more injurious than charas, and they also should be prohibited as well as liquor. He would not recommend immediate prohibition, but would put on such a tax, increasing it gradually, as to make it impossible for the majority of people to buy them at all.

Dr. H. M. Clark, Missionary (*46*), would like to see charas prohibited if it were possible. He thinks, however, that alcohol does more harm than charas. He cannot believe that a moderate use of charas is possible. Fakirs and devotees are the chief consumers.

Devi Dayal, Editor of the Kaistha Mitra, Lahore*, circulation 300 copies (83), says: "If charas be called poison (fatal, killing, murdering drug), it is not an exaggeration of any kind. It is a great vice to smoke charas. May God not give this even in the lot of a foe. Only just people as have bad luck get engaged in this vice. Government will do their subjects a very great obligation by saving them from early death and whirlpool of destruction and ruin. My present belief is that there is no such thing as moderation in the use of charas, because, when a *charsi* visits another, he offers him the *chillum*, and they smoke in company. The smoke is thus repeated frequently." Consumers acknowledge that they would have no complaint; and if Government were to prohibit the use of charas to-morrow, the bad habit would die out of itself.

Ganesh Das, Pleader, and President, Sarin Sabha, Hoshiarpur (*77*): Charas is consumed by shoemakers, musicians, jogis, sanyasis, and suthra fakirs, and by some Khatris and Brahmins. The physical effects are very bad, and most consumers become incapacitated for work and lead a miserable life. The sub-committee of the Sarin Sabha appointed to consider the subject recommend prohibition. Enquiry was not made from medical experts. Consumers would not take to other intoxicants, because the intoxication of charas is not like that of opium or other intoxicants. The greatest loss would be that of the traders of Hoshiarpur and Amritsar, who take merchandise to Ladakh and Yarkand and bring back charas.

Opinions against prohibition of charas.

577. The following is an analysis of some of the most important evidence against prohibition:—

(*1*) *Prohibition impossible or unnecessary, or could not be enforced without a large preventive establishment.*

(1) Mr. Rivaz, First Financial Commissioner.
(3) Mr. Thorburn, Commissioner.
(6) Mr. Ibbetson, Deputy Commissioner.
(8) Mr. Maconachie, Deputy Commissioner.
(13) Mr. Drummond, Deputy Commissioner.
(66) Kazi Syad Ahmad, retired Government servant.

(*2*) *Prohibition would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger.*

(3) Mr. Thorburn, Commissioner.
(6) Mr. Ibbetson, Deputy Commissioner.
(10) Mr. A. Anderson, Deputy Commissioner.
(8) Mr. Maconachie, Deputy Commissioner.
(13) Mr. Drummond, Deputy Commissioner.
(29) Mr. Brown, Officiating Deputy Inspector-General of Police.

* This paper has ceased to exist.

(39) Thakur Das, Rai Bahadur, Assistant Surgeon.

(36) Bhagwan Dass, Assistant Surgeon.

(25) Muhammad Ikramulla Khan, Khan Bahadur, Honorary Extra Assistant Commissioner.

(27) Muhammad Barkat Ali Khan, Khan Bahadur, retired Extra Assistant Commissioner.

(61) Bahram Khan, Honorary Magistrate.

(93) Gujar Mal, Trader.

(94) Jawala Bhagat, Trader.

(3) Prohibition might lead to use of dhatura or other intoxicants worse than charas.

(76) Babu P. C. Chatterji, Judge, Chief Court.

(10) Mr. A. Anderson, Deputy Commissioner.

(18) Rai Bahadur Bhagwan Dass, Extra Assistant Commissioner.

(39) Thakur Das, Rai Bahadur, Assistant Surgeon.

(27) Muhammad Barkat Ali Khan, Khan Bahadur, retired Extra Assistant Commissioner.

(86) Lachman Dass, Merchant.

578. There are only two witnesses in the Central Provinces who advocate the prohibition of ganja. Honorary Surgeon-Major Harrison (38), on the retired list, employed in the Kalahandi State, advocates gradual prohibition, "which would cause discontent, but not any serious danger. The prohibition would no doubt be followed by recourse to alcohol and other stimulants." The other is a pensioned hospital assistant, who also advocates gradual prohibition.

Central Provinces.

Opinions in favour of the prohibition of ganja.

Opinions against prohibition of ganja.

579. The following is an analysis of some of the most important evidence against prohibition :—

(1) Prohibition impossible or unnecessary, or could not be enforced without a large preventive establishment.

(1) Mr. Neill, Judicial Commissioner.

(4) Mr. Laurie, Officiating Secretary to Chief Commissioner.

(2) Colonel Bowie, Commissioner.

(9) Mr. Drake-Brockman, Officiating Excise Commissioner.

(39) Dr. Prentie, Civil Surgeon.

(66) Rev. Israel Jacob, Missionary.

(2) Prohibition would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger.

(1) Mr. Neill, Judicial Commissioner.

(4) Mr. Laurie, Officiating Secretary to Chief Commissioner.

(2) Colonel Bowie, Commissioner.

(3) Mr. Anderson, Officiating Commissioner.

(6) Mr. Duff, Deputy Commissioner.

(27) Mr. Lowrie, Officiating Deputy Conservator of Forests.

(17) Batuk Bharthy, Superintendent, Kalahandi State.

(66) Rev. Israel Jacob, Missionary.

(68) Rev. Oscar Lohr, Missionary.

(22) Vinayak Balkrishna Khare, Excise Daroga.

(59) Lall Noorpraj Singh, Zamindar.

(47) Mir Imdad Ali, Honorary Magistrate.

(3) Prohibition might lead to use of dhatura or other intoxicants worse than ganja.

(1) Mr. Neill, Judicial Commissioner.

(9) Mr. Drake-Brockman, Officiating Excise Commissioner.

(39) Dr. Prentie, Civil Surgeon.

(64) Rao Sahib Balwantrao Govindrao Bhuskute, Jagirdar.

580. The Madras witnesses in favour of prohibition are a Civil Surgeon, a subordinate civil officer, a medical practitioner, a Hindu priest, and six missionaries.

Madras.

Opinions in favour of the prohibition of ganja.

Dr. King (*85*) says: "The restriction of the sale of ganja under conditions similar to those required for poisonous drugs in Great Britain would be an unqualified blessing to the country, thus contrasting with the action taken against opium, which agitation I believe to be unnecessary and mischievous. I consider special measures should be taken to restrain the use of ganja by sepoys, and especially to prevent the young sepoy from acquiring the habit." In oral examination, however, Dr. King stated as follows: "My opinion of the effect of the moderate use in impairing the moral sense and inducing laziness, etc., is a general impression and not based on actual observation. My impression is based on the fact that persons alleged to have been ganja smokers have presented these characteristics. They were pointed out as notorious ganja smokers. I did not discriminate in these cases between the moderate and excessive use."

Syad Mahmud (*122*) says: "It is an unquestionable fact that ganja, bhang, and charas are poisons, and this fact is admitted by all. In my opinion their suppression would be an act of virtue deserving of future reward, but it is not advisable to suppress their use at once. Its suppression should be regulated under certain rules without any loss to the State. To the best of my knowledge and researches, alcohol cannot be safely used as a substitute for ganja, charas, and bhang."

Rev. Mr. Laflamme (*153*), speaking on behalf of the Baptist Missionary Conferences of the Presidency, advocates prohibition in these terms: "Owing to the scarcity of shops in these parts, practical prohibition exists. Much that is consumed is consumed illicitly. The introduction of the license system seems to have had no appreciable effect on the use of the drugs. The ganja is nearly all grown by the consumers in their own yards." "The drugs should all be so safeguarded as to prevent or minimize any possible harm resulting from their abuse." "The general sense of the people is opposed to the use of the drugs." So far as the witness can gather, the members of the Mission are united in the belief that in these parts hemp drugs are far less injurious than opium and alcohol;

thus far that the latter are not only much more extensively used, but much more baleful in their effects. Two other missionaries, though neutral in opinion, are worth quoting. *Rev. Mr. Pittendrigh, Missionary* (*160*), says that he would have ultimate prohibition in view if possible, but there is not much ground for special interference in anything that he has seen. Another Missionary, the *Rev. Mr. Goffin* (*145*), cannot undertake to criticise the present or any system of excise administration. His impression is that Government would be wise to adopt a strictly "let-alone" policy, leaving it to the spread of education and enlightenment among the people to prevent and lessen all its effects. The province of Government should be carefully to watch such effects, and wherever and whenever necessary interfere with prohibitive legislation. Such necessity, however, in his opinion would not often occur.

Opinions against prohibition.

581. Among those who are opposed to prohibition, the evidence of the following witnesses may be quoted:—

(*1*) *Prohibition impossible or unnecessary, or could not be enforced without a large preventive establishment.*

(1) Hon'ble C. S. Crole, Member, Board of Revenue.
(8) Mr. Willock, Collector.
(14) Mr. Bradley, Collector.
(19) Raja K. C. Manevedan, Collector.
(23) Mr. Campbell, Sub-Collector.
(30) Mr. Levy, Acting Deputy Collector, Salt and Abkari.

(*2*) *Prohibition would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger.*

(8) Mr. Willock, Collector.
(10) Mr. Stokes, Collector.
(6) Mr. Sewell, Collector.
(30) Mr. Levy, Acting Deputy Collector, Salt and Abkari.
(94) Dr. Walker, Civil Surgeon.
(95) Dr. Sarkies, Civil Surgeon.
(38) Buddhavarapu Narayana Murthi Pantalugaru, Assistant Collector.
(23) Mr. Campbell, Sub-Collector.
(121) H. S. A. M. Manju Miyyah Sahib, Medical Practitioner.

(*3*) *Prohibition might lead to use of dhatura or other intoxicants worse than ganja.*

(23) Mr. Campbell, Sub-Collector.

582. For the prohibition of ganja or charas in Bombay and Sind, we have the following advocates: in Bombay two mamlatdars, a hospital assistant, and a medical practitioner; and in Sind a health officer, two hospital assistants, and a banker. There is not much that need be quoted from the evidence of these witnesses. It may be noted that the Hon'ble T. D. Mackenzie, Commissioner of Abkari, etc. (1), holds that the policy of Government in

Bombay.

Opinions in favour of prohibition of ganja.

relation to the hemp drugs should be one of restriction, as far as restriction is possible, and that, if absolute prohibition were possible, he thinks it would be a good thing. Owing, however, to the fact that the territories of the Bombay Presidency interlace so extensively with foreign territory, and to the feeling which would be aroused among the consumers and those who sympathize with them, it would in his opinion be impossible or undesirable. The Secretary to the Arya Samaj in Bombay (109) states that while fully sympathising with the objects of the Commission, which are apparently understood to be the restriction or prohibition of the drugs, the Arya Samaj "is of opinion that any Governmental action in the direction of further restricting the preparation and sale of the drug will be productive of very little good. The Samaj believes that education of the masses is the only proper and effective remedy for correcting such baneful habits, and fears that any compulsion in this matter is likely to drive the consumers of these comparatively innocuous drugs to the use of more injurious intoxicants that are plentifully supplied to the people like the various preparations containing alcohol." The Samaj prays that the Government will devise measures for the restriction of the sale of European liquor in India, and leave the hemp drugs to themselves. The only thorough advocate of prohibition whose opinion is worth specifying is Rao Sahib Shesho Krisna Madkavi (41), who considers such prohibition very necessary, and holds that, although there would be temporary discontent among the consumers, such discontent would not amount to a political danger, "the people in this part of the country being loyal and of mild nature, and the proportion of the persons using bhang and ganja to the general population being too small to be taken into consideration."

583. On the other hand, the opinions against prohibition are weighty. The following may be specially quoted :—

Opinions against prohibition.

(1) *Prohibition impossible or unnecessary, or could not be enforced without a large preventive establishment.*

Bombay.

(1) Hon'ble T. D. Mackenzie, Commissioner of Abkari, etc.

(3) Mr. Vidal, Chief Secretary to Government.

(10) Mr. Monteath, Collector.

(12) Mr. Cumine, Acting Collector.

(53) Mr. Vincent, C.I.E., Officiating Commissioner of Police.

(110) Rai Bahadur Vishvanath Keshava Joglekar, Merchant.

(108) Daji Abaji Khare, Honorary Secretary, East Indian Association.

Sind.

(1) Mr. James, Commissioner in Sind.

(26) Seth Vishindas Nihalchand, Zamindar and Merchant.

(2) *Prohibition would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger.*

Bombay.

(1) Hon'ble T. D. Mackenzie, Commissioner of Abkari, etc.

(2) Mr. Reid, Commissioner.

(10) Mr. Monteath, Collector.
(8) Mr. Lely, Collector.
(59) Mr. Foard, Superintendent of Police.
(57) Mr. Austin, District Superintendent of Police.
(54) Mr. Kennedy, District Superintendent of Police.
(26) Khan Bahadur Dadabhai Dinshaji, Deputy Collector.
(38) Mr. Almon, Assistant Collector of Abkari.
(49) Yashvantrao Nilkanth, Superintendent, Office of Survey Commissioner.
(104) Desaibhai Kalidas, Pleader.
(46) Balkrishna Narayan Vaidija, State Karbhari.
(39) Rai Sahib Ganesh Pandurang Thakur, Mamlatdar.
(110) Rai Bahadur Vishvanath Keshava Joglekar, Merchant.
(100) Parbhuram Jeewanram, Vaidya.
(115) Nanu Mian B. Shekh, Municipal Secretary, Surat.

Sind.

(1) Mr. James, Commissioner in Sind.
(4) Khan Bahadur Kadirdad Khan, Gul Khan, C.I.E., Deputy Collector.
(5) S. Sadik Ali, Deputy Collector.
(26) Seth Vishindas Nihalchand, Zamindar and Merchant.

(3) Prohibition might lead to use of dhatura or other intoxicants worse than ganja.

Bombay.

(1) Hon'ble T. D. Mackenzie, Commissioner of Abkari, etc.
(6) Mr. Sinclair, Collector.
(53) Mr. Vincent, C.I.E., Officiating Commissioner of Police.
(49) Yashvantrao Nilkanth, Superintendent, Office of Survey Commissioner.
(62) Rao Sahib Pranshankar, Inspector of Police.
(102) Ramchandra Krishna Kothavale, Inamdar.
(109) Secretary, Arya Samaj, Bombay.

Berar, etc.

584. From the minor administrations in Berar, Ajmere, Coorg, and Quetta-Peshin, there are no opinions requiring special notice. The statistical detail has been given in the table in paragraph 569.

General conclusions in regard to total prohibition of ganja, charas, and bhang.

585. A general review of the evidence relating to the question of prohibition of ganja and charas brings the Commission to the same conclusion as that which they have framed upon a consideration of the evidence on the ascertained effects alone. The weight of the evidence above abstracted is almost entirely against prohibition. Not only is such a measure unnecessary with reference to the effects, but it is abundantly proved that it is considered unnecessary or impossible by those most competent to form an opinion on general grounds of experience; that it would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger; and that it might lead to the use of dhatura or other intoxicants worse than

ganja. Apart from all this, there is another consideration which has been urged in some quarters with a manifestation of strong feeling, and to which the Commission are disposed to attach some importance, *viz.*, that to repress the hemp drugs in India and to leave alcohol alone would be misunderstood by a large number of persons who believe, and apparently not without reason, that more harm is done in this country by the latter than by the former. The conclusion of the Commission regarding bhang has been given in paragraph 564; under all the circumstances they now unhesitatingly give their verdict against such a violent measure as total prohibition in respect of any of the hemp drugs.

Policy in regard to hemp drugs.

586. Failing prohibition, the question arises, what should be the policy of the Government in regard to the hemp drugs? On this point some important evidence has been recorded, and the Commission deem it to be within the scope of their duty to state in general terms their own conclusions. In the first place, then, they are of opinion that in view of the harmful effects produced by the excessive use, and in exceptional cases even by the moderate use, of the drugs, the action of the Government should be directed towards restraining the former and avoiding all encouragement to the latter. The object should be to prevent the consumers, as far as may be possible, from doing harm to themselves and to lessen the inducements to the formation of the habit which might lead to such harm. In aiming at this object, however, other considerations need to be kept in view. There is in the first place the question of illicit consumption. If the restriction imposed by Government is counterbalanced by a corresponding increase in smuggling, no advantage is gained, but, on the contrary, a moral wrong is done to the community apart from the annoyance necessitated by such restrictions. Then, if there is a legitimate use of the drugs, restrictions should not be such as to make the exercise of this use impossible. The Commission have formed the opinion that there is a legitimate use of the hemp drugs, and that it exists generally among the poorest of the population. Again, if the restrictions lead to the use of more deleterious substances, or even drive the people from a habit the evil of which is known to another of which the evil may be greater, they are no longer justifiable. The policy of Government must be tempered by all these considerations, and the neglect of any one of them may lead to serious error.

Objection to raising revenue from hemp drugs.

587. In this connection an objection to the present system, which has been raised by some few of the witnesses, deserves a brief notice. They have laid down the maxim that the Government should not derive revenue from the vices of the people, and starting from this theory they condemn the taxation of the hemp drugs. Now, if the habit of using the hemp drugs were so disastrous as to call for suppression, and such suppression were possible, the conclusion would be just. But this is not the Commission's view, and the policy which the Government has generally adopted of restricting the use by taxation is in their opinion the right one. Taxation by itself does not imply encouragement, though the methods by which it is raised may, if not guarded, tend to encouragement. And this is perhaps the tendency which the witnesses above alluded to mean to criticise. As regards the taxing of intoxicants generally, the Commission cannot do better than quote from a standard work on political economy by Professor Henry Sidgwick (Chapter VIII, paragraph 7): "Generally speaking, it is desirable to select

for taxation commodities of which the consumption is not likely to be restricted to any great extent through the desire to avoid payment of the tax, as all such restriction increases the excess of the loss to the public caused by the tax over and above the gain to the Treasury, since the persons who are driven to consume commodities which they do not like so well suffer a manifest loss of utility. But there is one exceptional case very important in our own system of taxation in which this principle does not apply, *viz.*, where the commodity taxed is largely consumed in excess of what is salutary. So far as such excess is prevented by the tax, the restriction of consumption is positively beneficial to the community; and though legislative interference with the sole object of limiting the consumption of dangerous commodities is emphatically condemned by advocates of natural liberty, they have not for the most part pushed their antagonism so far as to maintain that the selection of taxes ought not to be partly influenced by this consideration." In the opinion of the Commission, the general principle may be fearlessly asserted that it is right to tax intoxicants; and the higher they are taxed the better, provided the considerations mentioned in the last paragraph are not lost sight of. The primary object of such taxation should not be the enhancement of the revenue, but the control of the habit; and, if this end is kept in view, the revenue which flows into the Treasury from this source need be viewed with no more suspicion than the fines on criminals for breaches of the law. If it is necessary to put briefly in words a description of what the policy of the Government should be in regard to the hemp drugs, it would be somewhat as follows: To control their use, and especially their harmful use, in such a manner as to avoid a worse evil, and, subject to this proviso, to tax them as fully as possible.

Systematic treatment necessary.

588. In order to bring about such control as will enable Government to deal thoroughly with the question, systematic treatment is necessary. The system approved for one province must not be reversed in the next. A standard of administration consistent with itself must be put before the Native States, which in many cases are interlaced with British territory, or it will be impossible for them to co-operate. On this subject the evidence of Mr. J. W. Neill, Judicial Commissioner, Central Provinces, may be quoted. He says: "I think in the case of a drug so generally consumed as ganja, the system of taxation and control should be, if not uniform for all provinces, yet on somewhat the same lines, and that the tax should fall, if not at the same rate, still at such rates that there should be no great temptation to smuggle from one part of British India into another." It is doubtless owing to the same feeling that Mr. Cadell, Member of the Board of Revenue, North-Western Provinces, records his opinion that "the present system of taxation (in those provinces) is not worthy of maintenance," and that "other Governments should not alter rates of taxation where other provinces are concerned without consulting them." This is also no doubt what underlies the opinion of the Madras Board of Revenue given in March 1892 that "restrictions will gradually have to be placed on the cultivation, possession, and transport of ganja." In this connection the opinions of Mr. Vidal, Chief Secretary to Government, and Mr. Reid, Commissioner in Bombay, may be quoted to the effect that there is no reason why the hemp drugs should be cheaper in that Presidency than in other provinces; and that of Mr. Rivaz, First Financial Commissioner in the Punjab, that hemp drugs in that province are insufficeintly taxed.

Question of introducing a Government monopoly for hemp drugs discussed.

589. The Commission have considered the question of adopting in respect of ganja, and possibly also of charas, a system of Government monopoly similar to the opium excise system. The Bengal Government considered this question both in 1877 and in 1887, and declined to entertain the proposal. In this province there are now several advocates of the system, *viz.* :—

(1) Hon'ble D. R. Lyall, C.S.I., Member, Board of Revenue,
(17) Mr. K. G. Gupta, Excise Commissioner,
(13) Mr. H. C. Williams, Collector,
(12) Mr. A. C. Tute, Collector,
(11) Mr. F. H. B. Skrine, Collector,
(33) Mr. R. H. Renny, Deputy Commissioner,
(30) Mr. A. E. Harward, Officiating Collector,

and seven other official and non-official witnesses. And Mr. Nolan, Commissioner, (7), though he is averse to the idea of a Government monopoly, advocates the establishment of a single centre for the whole of India from which the supply of ganja should be issued, its production being prohibited in all other places; and adds that the wants of all India could be supplied from Naogaon. It is almost needless to say that if such a proposal were entertained, the monopoly of supply must rest with the Government, and the Commission are by no means inclined to think that the arrangement would be a good one. The arguments for a Government monopoly are that the control of supply, quality, and price of the drug would be more complete; that Government would secure the profits now enjoyed by wholesale vendors or other middlemen; that consumption would be limited to the minimum demand; and that the cultivators of the plant would be in a better position in having to deal direct with Government. The Commission have given full consideration to these arguments, and have arrived at the conclusion that the objections to the system on the whole outweigh its recommendations, while the objects above enumerated can be sufficiently attained without its adoption. There is in the first place the sentimental objection to Government identifying itself more closely with the traffic—an objection to which, having regard to the best interests of the people, the Commission are not disposed to attach much weight, while, on the other hand, it is most probable, if the measure were adopted, that the motive would be misunderstood and the policy severely criticised by those who are not acquainted with the facts. But the practical objections are more serious. The Government would be undertaking an enormous risk in purchasing the whole of the produce and storing and distributing it to the different provinces. For ganja or charas is a perishable commodity to a greater degree than opium, and the demand for the whole of India and for most of the provinces is very little known. Again, the establishment of such a system would require an amount of attention and detailed administration not only involving large expenditure in the appointment of a separate department, but also much of the time and energies of superior servants of Government which could not be spared from the ever increasing demands of the general administration. Further, the administration of the excise on hemp drugs is in most provinces in a backward state, and the arrangements are by no means ripe for the assumption by Government of operations at present conducted by private enterprise under conditions but imperfectly ascertained. And, finally, such a system would involve complete and

final arrangements with the Native States, which, even if ultimately practicable, would take an indefinite time to elaborate, and would probably be regarded by them with disfavour. All, therefore, that the Commission are prepared to say in favour of a Government monopoly is that after full consideration they are unable to discover any well founded objection to it on the ground of public morality, and that in their opinion the Government need not be deterred from adopting it on this ground if the practical objections which have been mentioned above are in regard to any part of British India either at the present or at any future time deemed to be of less weight than the Commission have attached to them.

Supervision by Government of India necessary.

590. But while opposed to this amount of interference, the Commission feel strongly that a regulating influence is necessary, and should in future be exercised by the Government of India over the various systems of administration of the excise on hemp drugs which prevail in the different provinces and in the Native States. A standard of administration and taxation is essential to the proper treatment of the whole subject. Existing differences are so great that it will take time to bring about any measure of uniformity, but the Commission, as will be shown hereafter, have found no reason for maintaining the present inequalities, and no serious obstacle to the gradual harmonizing of the different systems.

CHAPTER XV.

EXISTING SYSTEMS DESCRIBED.

591. The various systems of excise administration obtaining in the different provinces have been described in the memoranda which are published in Vol. III Appendices. A brief notice of these systems will be reproduced here, and the question how far they fulfil the conditions of the policy above noted will then be discussed.

Systems of excise in the various provinces.

592. The law in force in Bengal is contained chiefly in the Bengal Excise Act, VII of 1878, and rules passed thereunder. The principal provisions are as follows:—

Bengal. Law in force.

Without a license from the Collector, the manufacture of ganja, charas, and bhang, and every preparation and admixture of the same, and the cultivation of plants from which they are produced, are prohibited (section 5).

No person is allowed to sell any of the above drugs or preparations or admixtures of them without a license from the Collector (section 11).

Fees for licenses for retail sale of the above drugs may be fixed by the Board of Revenue, and will be payable accordingly (section 13).

No license fees are leviable for the privilege of wholesale vend. The limit for retail sale is as follows: Ganja or bhang, or any preparation or admixture of the same, one quarter of a sér; charas, or any preparation or admixture of the same, 5 tolas weight. No licensed wholesale vendor is allowed to sell by retail and no licensed retail vendor is allowed to sell by wholesale, but the same person may hold a license for wholesale and retail vend. The Board may fix a larger quantity as the limit for retail sale (sections 15 and 60).

No cultivator of the plants producing ganja or bhang may sell such plants, or any ganja or bhang produced therefrom, to any one other than a person duly authorized to purchase the same by pass or license from the Collector (section 16).

No person, not being a licensed manufacturer or vendor or a person duly authorized to supply licensed vendors, may have in his possession a greater quantity of ganja, charas, and bhang, or any preparation or admixture of the same, than that specified above as the limit for retail sale (section 17).

The penalty attached to the breach of this provision does not apply to authorized cultivators (section 62).

The Board may, with the sanction of the Local Government, declare that the possession of any foreign ganja, charas, or bhang, or any preparation or admixture of the same, is absolutely prohibited in any specified tract, or that such possession shall be limited to specified quantities, unless a license has been granted for the possession of a larger quantity of such article. The Board may fix the fee or duty payable for such license (section 17-A). Under this section the limit of legal possession of Garhjat ganja has been fixed at 5 tolas.

The Board, with the sanction of the Local Government, may frame rules for prescribing the conditions under which ganja, charas, or bhang, or any preparation

or admixture of the same, manufactured in any part of British India beyond the territory to which the Act extends may be imported, and, where no duty has previously been paid on such articles, the conditions under which they may be imported and bonded within such limits (section 19-A).

The Collector may, with the sanction of the Board, let in farm the duties leviable on the abovementioned drugs, or any of them, in any district or division of a district (section 20).

The Board may prescribe rules for the invitation and acceptance of tenders for such farms, for the requisition of security for the due fulfilment of the engagements entered into by the farmers, and as to the form and conditions of the lease. The Board may regulate the form and conditions of all licenses granted under the Act (section 28).

The Board may frame rules for the grant of licenses or passes to persons purchasing, transporting, or storing ganjà, charas, or bhang for the supply of the licensed vendors of those drugs, and may place the cultivation, preparation, and store of such drugs under such supervision as may be deemed necessary to secure the duty leviable thereon (section 35).

Manufacture not defined.

593. With reference to the above provisions, the Commission observe that there is no definition in the Act of "manufacture," and that, apart from the provision relating to possession, the collection of bhang from the hemp plant, which hardly comes under the designation of "manufacture," does not appear to be prohibited or controlled.

The system in Bengal: Rajshahi ganja.

594. The system which has been elaborated under these provisions of the law will now be briefly described. Though the hemp plant grows spontaneously in many districts of Bengal, this fact does not seem to affect the ganja administration to any great extent, as ganja, except of a very inferior sort, cannot be manufactured from the wild plants. Cultivation of the hemp plant for the production of ganja is only allowed in an area of about 64 square miles in the Rajshahi Division. Every cultivator has to take out a license for which no fee is charged. Within the area above mentioned, which, for the purposes of ganja administration, is placed under the jurisdiction of the Collector of Rajshahi, though it lies in the three districts of Rajshahi, Dinajpur, and Bogra, applications for licenses are granted, unless there be any valid objection, and remain in force for one working year. The average area of ganja cultivation is 2,220 bighas, equal to 740 acres. What follows is in the words of the Hon'ble D. R. Lyall, C.S.I., Member, Board of Revenue: "The cultivation is inspected by supervisors throughout the period of growth, the areas cultivated being compared with the licenses. The cultivator cuts his crop not necessarily under the supervisor's eye, nor does he require to get permission, but he gives 3 days' notice of his intention to cut. The manufacture is done by the raiyat at his own option as to time and place. The supervisors move about and supervise the manufacture as far as they can. Practically the bulk of the manufacture is not completed under the supervisor's eye. When the manufacture is complete, the raiyat carries his produce to his own store under the latter part of rule 11 of section xx of the Excise Manual, page 155, there being no public godown large enough to

receive the whole crop. A license is given to the raiyat describing the quantity and kind of ganja he is allowed to store, and authorizing him to keep it until he disposes of it to a licensed purchaser. The amount is arrived at by the supervisors by inspection of the crop after manufacture and the number of bundles into which it is manufactured. The crop is made up by the raiyat into 2-sér bundles, and by long practice the measurement is wonderfully exact, though it is done by guess. The raiyats' store is generally situated close to his manufacturing ground. The wholesale dealer comes to the *mahal* armed with a license from the Collector of his own district giving the amount he is authorized to export. He makes his own arrangements with the raiyats, visiting any store he likes, and, as far as I know, unaccompanied by a supervisor or any excise officer. Having made his bargain, the dealer brings the ganja to the Government gola, where it is weighed, and the sale recorded on the back of the raiyat's license as well as in the Government books. No pass is required for the removal of the ganja from the raiyats' store to the Government gola. The dealer's consignment is sealed at the Government gola, and then carried by the wholesale dealer under pass to his gola at the head-quarters or sub-division of the place of import. There it is placed under double lock, one being in the possession of the dealer, and the other in the possession of the Excise Deputy Collector. The wholesale dealer sells to the retail vendor at his own price, and the retail vendor sells to the public at his own price, except in one district, where a maximum limit is imposed under the terms of the arrangement with the monopolist. This district is Cuttack. The right of retail vend is sold by auction."

595. The above procedure differs in one important respect from that prescribed in the rules issued by the Board, inasmuch as these rules contemplate the storing of the ganja in a public gola, and there is an exceptional provision permitting storage in a private gola, when a cultivator can satisfy the supervisor that he has a secure private place of his own. He is then allowed to store his ganja there subject to periodical inspection by the supervisor or his assistants. There is no public gola for the storage of the crop, hence the exception has become the rule.

Where the existing practice differs from the rules.

596. Ganja is not ordinarily imported from any other British province into Bengal, but ganja grown in the Orissa Tributary Mahals (Garhjat) is imported under passes in small quantities into the districts of the Orissa Division. The rules as to storage and levy of duty on Rajshahi ganja apply *mutatis mutandis* to Garhjat ganja. Any vendor licensed to retail Rajshahi ganja may sell Garhjat ganja under the same license. The Excise Commissioner states that Garhjat ganja is largely smuggled into Orissa. This subject will be again mentioned further on. With this exception, the growth and trade in ganja in Bengal is fairly under control. The cases of illicit cultivation are few. They are all of a petty description, such as the growing of a few plants (very often only a single plant) in the courtyards of houses more for the purpose of using the leaves as bhang than for manufacturing ganja. Cases of unlicensed sale of ganja, though comparatively numerous, generally represent sales of the excised drug by petty dealers who have obtained their supplies from licensed vendors, and often occur from the licensed shops being too few to supply the local demand. The system in force in the Ganja

Garhjat ganja and illicit practices.

Mahal in the Rajshahi Division gives some opportunity for illicit disposal of the ganja, partly owing to the inadequacy of the supervising staff, and partly to the storage arrangements above mentioned; but the principal authorities are of opinion that very little smuggling actually occurs. Mr. Lyall, while admitting that the facility afforded for smuggling constitutes the weak part of the Bengal system, gives the following reasons for his belief that it does not exist to any extent: "One at least is that I have never come across a case of smuggled ganja, though cases of opium smuggling are not uncommon. The safeguards against illicit practices are the concentration of the area of growth and the crop estimate made by the supervisors when the crop is on the ground. The bulkiness of ganja is an additional safeguard as compared with opium. We have never within my knowledge discovered a cultivator disposing of his crop illegally. Of course, if there were collusion between the protective establishment and the cultivators, this safeguard would be of little use; but, as a fact, I believe the establishment is trustworthy."

Charas.

597. Charas is not made in Bengal. A very small amount is imported from Upper India under passes, and after paying duty is sold by licensed vendors.

Bhang.

598. There is no licensed cultivation of the hemp plant for production of bhang in Bengal. Bhang is either imported from the North-Western Provinces or collected for the market from the spontaneous growth which abounds in Bhagalpur and in districts north of the Ganges, especially Monghyr and Purnea. It has been observed above that this collection of the leaves hardly comes within the term "manufacture," and no license is, therefore, legally necessary for the process. But legal possession of bhang, except by licensed persons, is limited to $\frac{1}{4}$ sér, hence all transactions of any importance require a license. On the other hand, there is no restriction on the use of the hemp plant in its green state. It is only when prepared to be used, stored, or sold as a narcotic or stimulant that it comes under Excise rules. Passes are required for the purchase or obtaining of bhang for export to another district, or for sale, which must be accompanied by a license from the Collector of the district into which the bhang is to be conveyed, or in which it is to be stored. The rules for storage are similar to those for ganja, and a small duty is levied when the bhang is removed from the warehouse to be taken to the shop for retail sale. The extensive growth of the plant in the districts above mentioned renders control of transactions in bhang very difficult, and it is certain that the amount brought to record and dealt with under Excise rules does not by any means represent all the bhang consumed in Bengal. "The use of untaxed bhang," says the Excise Commissioner, "is general." In January 1893 orders were issued by the Excise Commissioner with the object of extirpating the spontaneous growth of the plant, and thus bringing bhang under more efficient excise control; but the orders were cancelled by the Bengal Government in the following June on the ground that the attempt was impracticable, and likely to have no result except petty oppression. There is therefore practically little control over the production and use of bhang in Bengal; and although the revenue from excise bhang has increased considerably, this is mainly owing to the fact that the duty is very low and not worth evading on the part of the licensed vendors.

599. The Act is almost silent on the subject of wholesale vendors. The agency by which the retail vendors are supplied has grown up from the exigencies of the case. Every wholesale vendor must rent one of the warehouses provided by Government for storing ganja, or must provide one to the satisfaction of the Collector who grants the license. Where warehouses are provided by Government, the Commissioner determines the number of private warehouses, if any, to be licensed. The number of wholesale dealers in any place must not exceed the number of Government and licensed warehouses. Where the number of applicants exceeds the number of Government warehouses, the leases of the latter are put up to auction. These middlemen reap large profits, and to a large extent control the market. They very often combine the functions of retail vendor with those of wholesale vendor. Mr. Price, Collector of Rajshahi, says of them that they superintend the manufacture of the ganja to suit their own tastes, and practically become the owners of the ganja without assuming the responsibilities that devolve on them. He says that their absence from the ganja tract would itself cause the decline of the cultivation. Out of this state of things another class has arisen in the ganja brokers. These men negotiate for the sale of the standing or manufactured crop to wholesale vendors. Forms of licenses to ganja brokers and wholesale vendors have been issued by the Board.

Wholesale vend.

600. For the retail vend of ganja, charas, and bhang separate licenses are issued. There is no restriction as to the price at which the drugs are to be sold to the public. The number of shops is fixed by the Collector according to the demand for the drug. The licenses are sold by public auction for one year. Notwithstanding occasional fluctuations, the number of ganja shops has been reduced in the last 20 years from 4,398 to 2,672. The number of charas shops decreased largely down to 1889-90, since when there has been an increase, but not nearly to the former figure. The number of bhang shops has been more stationary. Consumption on the premises is not prohibited. There is no restriction as to the persons to whom the drugs may be sold. Local opinion is not ordinarily consulted regarding the establishment of shops, but attention is paid to any reasonable objection raised against any particular site.

Retail vend.

601. The revenue from hemp drugs in Bengal is realized in the form of direct duty and license fees for the right of retail vend at a fixed shop only. The duties per sér levied on the drugs warehoused are as follows:—

Taxation.

	For the province generally.	For the Orissa Division.
Ganja:	Rs. A. P.	Rs. A. P.
Chur ...	9 0 0	7 8 0
Round ...	7 8 0	6 4 0
Flat, small twigs	7 4 0	4 8 0
„ large „	6 0 0	
Charas ...	8 0 0	8 0 0
Bhang ...	0 8 0	0 8 0

The duty is levied before the drugs are removed from the wholesale dealer's warehouse. The duty is calculated on the actual weight of the drug issued,

except in the case of charas, half the duty on which is levied at the time of taking out the pass for the importation of the drug.

The importance of the ganja traffic in Bengal may be gathered from the fact that in the year 1892-93 1,510 maunds were exported to other provinces and 5,451 maunds paid duty, amounting to Rs. 12,80,631. The license fees for retail sale of ganja amounted to Rs. 11,05,435 in addition. The total revenue from charas, of which only 11 maunds 26 sérs paid duty, was Rs. 9,097, and from bhang, of which 1,033 maunds paid duty, Rs. 53,558.

602. The law in force in Assam is the same as in Bengal, and the Bengal Excise Manual is followed.

Assam.
Law in force.

603. There is no licensed cultivation of hemp for the production of the drugs. Excise ganja is supplied from Bengal under pass, and pays duty in the province. The vend of charas and bhang is practically forbidden, as no licenses for their sale have been taken out. Wild hemp grows spontaneously in many parts of the province, and especially in the hill tracts. The officiating Excise Commissioner says: "There is nothing to show that the trade in the wild plant is sufficiently large to compete seriously with excise ganja, unless possibly in the Khasi Hills, where the continuous decrease in the consumption of the Rajshahi drug can, I think, only be attributed to the cheapness of wild hemp and the great facilities for its use. The excise administration of the district is attended by abnormal difficulties owing to the fact that the Khasi Hills are parcelled out into the territories of many semi-independent chiefs. The wild plant is used by habitual consumers only as a *pis aller*, and when their supply of the excise ganja runs short." This view is not shared by the Excise Commissioner, Mr. Driberg, who says: "I think this so-called wild hemp affects our revenue very considerably. It is used by certain consumers, and is also mixed by vendors with excise ganja and sold." Mr. Driberg states that he does not think there is any such thing as wild ganja. As a rule the plant is found in lands occupied by the owner's homestead. From this he infers that the growth is very ordinarily surreptitious. He thinks that the practice of Deputy Commissioners in treating this growth as unlicensed cultivation differs considerably. A circular issued by the Chief Commissioner in October 1882 contains a ruling which appears to be the cause of this diversity of practice. The concluding portion runs as follows: "You will observe that in rule 2, section 17, of Chapter XV, of the Board's Rules it is said that 'no restriction is imposed on the use of the hemp plant in its green state for medical or other purposes, or on its manipulation for the manufacture of fibre. But any preparation of the plant to be used, stored, and sold as a narcotic or stimulant is prohibited except under the rules framed by the administration.' This rule mentions the medicinal use of the plant only 'in its green state;' but if, as appears to be the case, the wild hemp is also used for medicine for cattle when dried, the Chief Commissioner desires that the rule may be liberally interpreted, and no penalty imposed when it is probable that the cultivation or the drying and storing of it was only for this purpose. Whether this is so or not is a question of fact." Mr. Driberg, whose experience of Assam is unique, does not believe that the plant is used to any

Supply of the drugs.

extent for cattle. He thinks that it is a mere excuse made by those who really want to use it. He thinks the circular was unnecessary, and issued on insufficient information. The subject is discussed in Chapter X.

System of vend and taxation.

604. The system of vend is the same as in Bengal. The amount of ganja which paid duty in 1892-93 was 620 maunds, representing duty to the sum of Rs. 1,39,545. License fees amounted to Rs. 1,64,088.

North-Western Provinces. Law in force.

605. The excise on hemp drugs in the North-Western Provinces is administered under Act XXII of 1881 and rules thereunder. The principal provisions of the law are as follows:—

The chief revenue authority may from time to time make such rules to restrict and regulate the cultivation of hemp and the preparation of intoxicating drugs therefrom as it may deem necessary to secure the duty leviable in respect of those drugs (section 11).

No intoxicating drug may be sold except under and in accordance with the terms of a license granted under the provisions of the Act. But any cultivator of the hemp plant may sell any intoxicating drug prepared from his plant to any person licensed under the Act to sell the same, or to any person authorized to purchase the same, by the Collector's order in writing (section 12).

Subject to the rules made by the chief revenue authority under the power conferred by the Act, the Collector may grant licenses for the retail sale of intoxicating drugs within his district, or any part thereof, or at any place therein. Licenses for the sale of intoxicating drugs wholesale may be granted only by such officer as the Local Government from time to time appoints (section 13).

The Collector may, with the sanction of the chief revenue authority, let in farm the fees leviable in any district or part of a district on licenses for the retail sale of intoxicating drugs (section 16).

No person may have in his possession any larger quantity of the drugs than that specified as the limit of retail sale unless he is permitted to manufacture or sell the same. This amount is—

Ganja or charas, or any preparation or admixture thereof, 5 tolas.

Bhang, or any preparation or admixture thereof, one quarter of a sér (section 22).

The chief controlling revenue authority may from time to time make rules consistent with the Act as to the fee payable for each license or farm and as to the form of any license or farming lease (section 55).

The Act contains no provision relating to manufacture, import, export, or transport.

Supply of the drugs.

606. Under the rules now in force the cultivation of the hemp plant is free to all parties. There is no check therefore on the production of hemp drugs, and the possession of the drug without limit of amount is permitted to all cultivators, to owners of land in which the plant grows spontaneously, to licensed vendors, or to persons duly authorized to supply licensed vendors. This permission is also considered to

apply to the sale of their bhang by owners of spontaneous produce. Restriction, therefore, only operates when the cultivator sells his produce, and there is practically little, if any, check on the supply of the drugs produced in the province. The Excise Commissioner states that ganja of fair or good quality can be made, and is made locally. Charas is produced to some extent in Kumaon; and as the hemp plant grows abundantly in all the montane and submontane districts, bhang can be produced to any extent.

Imports of the drugs.

607. The ganja consumed in the province is mainly derived from Bengal, the Central Provinces, Gwalior, Bundelkhand, and, in small quantities, from Nepal and Indore, possibly also from Rewah. Where the production of this ganja is under excise management, these imports are of course subject to such management. The importers of ganja and bhang are said to be all contractors holding licenses for the sale of the drugs. Charas is brought by Punjabi traders, who sell to the contractors. These traders take out no licenses, and the Excise Commissioner states that the legality of the arrangement is questionable. Some of these traders themselves hold district contracts. Nearly the whole of the bhang consumed is grown in the province. A certain amount is imported from the Punjab, and goes chiefly to the western districts.

Notwithstanding the silence of the Act regarding import of the drugs, a rule has been passed that no ganja, charas, or bhang shall be imported into the province except under a pass. No import duty is levied. Transport and export are also made subject to a free pass.

Smuggling.

608. The Excise Commissioner is of opinion that the amount of smuggling from outside the province is quite inconsiderable, and this is confirmed by the Hon'ble A. Cadell, the Member of the Board in charge of Excise, and there is no very definite evidence to the contrary.

Defect in the North-Western Provinces system of supply.

609. The weak point in the North-Western Provinces system of supply is that the ganja which comes from the different provinces and States abovementioned is taxed before it reaches the frontier at widely different rates, and there is no equalization of this taxation after it has reached the province. Bengal ganja pays from Rs. 6 to Rs. 9 per sér, the Khandwa ganja pays no duty but small fees which may amount to Rs. 2 per maund, Gwalior ganja less than Rs. 5 per maund, and Bundelkhand ganja possibly as much as Rs. 2 per maund. And these different kinds of ganja are freely available under existing regulations to the licensed vendor, who has it in his power to play them off on the consumer in such a way as will best repay him without damaging his credit. In addition to this, the cultivation and manufacture of ganja locally is under no legal control. It is unnecessary to say more on this subject, as the Excise authorities have recorded their opinion that the present system needs reform, and proposals have been made which will be considered further on.

System of vend.

610. The right of selling the drugs is farmed to contractors, who are at liberty to procure the drugs wherever they like, and sell them at any price they choose. No distinction is drawn between the different kinds of drugs all are included in

the same license, and are stored by the farmer on his own premises. The contracts are usually for an entire district; in some cases for tahsils or parganas. There is nothing to prevent a contractor having separate contracts for several districts. The ordinary period is for one year, but contracts are now often given for two or three years, and the longer periods always fetch proportionally higher sums. The number and locality of the retail shops is fixed by the Collector subject to the orders of the Board, and is revised from time to time. The contractor either sub-lets the shops or works them through his servants. As a rule he holds the best shops in the large towns in direct management and sub-lets the rest. The contracts are sold by auction. The number of capitalists engaged in the trade is not very large, and nothing is commoner among them than combinations to keep down the price. The above account is taken from the Excise Commissioner's memorandum, who adds: "It is a defect in the system that it leaves the whole of the revenue collected here to be determined by the competition of the auctions. The advantages of the system are that a large revenue is very easily and cheaply collected, and that smuggling and other evasive illegal acts are minimized. The contractor has no reason to commit them himself, and it is his interest to detect any one attempting them. This is no small advantage from an administrative point of view. Retail prices are under the existing system kept at the highest possible point."

Consumption of drugs on the premises is not prohibited in the shop licenses, nor is there any restriction as to the persons to whom the drugs may be sold. Local opinion is not ordinarily consulted. Mr. Cadell says: "Hitherto the objection to shops has always come from above, *viz.*, from the Board, the Commissioner, or the Collector."

Statistics.

611. The statistics of import and export are very defective. The Excise Commissioner estimates the average imports of ganja and charas as follows:—

Ganja	...	...	...	... 4,000 to 4,500 maunds.
Charas	...	...	...	... 1,100 to 1,200 ,,

The license fees realized from the auction of the monopoly of vend amounted to Rs. 7,04,788, and this represents the whole of the taxation levied in the province.

Punjab. Law in force. Supply of the drugs.

612. The excise administration is based upon Act XXII of 1881 (see North-Western Provinces) and rules thereunder. Ganja is practically unknown in the Punjab. Charas is imported from Yarkand *viâ* Kashmir and Ladak and from Bokhara, and perhaps other Central Asian countries *viâ* Afghanistan. No charas is produced in the province except to a trifling extent in the hills for private consumption.

Bhang is collected from the wild plant which grows plentifully in the Sub-Himalayan districts. It is also cultivated to a small extent in Multan and in the Derajat Division, but the total area of cultivation is probably less than 100 acres. Cultivation is not controlled, and a cultivator cannot be prosecuted for the possession of bhang, though he is only allowed to sell his produce to a licensed vendor.

Import and transport.

613. The traders who bring charas from Yarkand are not licensed, but they have to obtain a pass from the Joint Commissioner at Leh or from the Deputy Commissioner of the

district where they enter the Punjab, and take it for countersignature to the Deputy Commissioner or Collector of every district in the Punjab or the North-Western Provinces which they may enter with the charas. The consignment may be opened at any head-quarters station or tahsil while on its way to its destination, and a portion of its contents may be sold to the farmer of excise for drugs, the fact being recorded on the pass and the package resealed. When a consignment is conveyed by rail, the provision requiring it to be taken to the Deputy Commissioner or Collector of every district through which it passes is dispensed with. The transport of bhang from the districts of growth to those of consumption is regulated by passes, no duty or fee of any sort being charged.

Excise system.

614. Hitherto the excise income from intoxicating drugs in the Punjab has been derived solely from the monopoly of sale within tahsils or other sub-divisions of districts. In some districts the monopoly of opium and other drugs prepared from the poppy is farmed separately from that of the hemp drugs, while in others the same farm includes both. Ordinarily the farm or license is held for the year, the fee payable being determined by auction. The present rules make no provision for the issue of wholesale licenses, but the new rules are to provide for such licenses. As a matter of account the fees paid in each district in respect of the combined opium and hemp drug licenses, where these are held together, are distributed between the two heads of receipt in a proportion which is supposed to represent the actual value of each set of licenses. This proportion varies from district to district. As a result of the practice described above, the number and locality of the shops are fixed beforehand from year to year, and as a matter of fact they are seldom altered.

The Punjab system of excise administration in regard to hemp drugs was described by the Excise Commissioner in his report for 1892 as "going very near to reversing the principle of a maximum of revenue with a minimum of consumption." In the report for 1893 the Excise Commissioner says: "Taking Rs. 1,70,854 to be approximately the real value of the licenses for the sale of hemp drugs, it represents the total taxation now levied on a consumption of upwards of 1,000 maunds of charas and of nearly 4,000 maunds of bhang." This is "the weakest part of our excise system in the Punjab. It is hoped that we are now within measurable distance of arrangements which will give us complete control over the import trade in charas, and enable us to impose a duty which can be gradually raised. Owing to the fact that the plant grows wild in so many districts, and is to be had for the gathering, while charas comes in by a few well recognised routes and can scarcely escape us, it is much more difficult to deal with the trade in bhang efficiently. But I am in hopes that the Government will agree before very long to the introduction of some measures for the direct taxation of bhang too."

In the form of license for retail vend of the drugs, there is no provision against consumption on the premises. There is a provision prohibiting the supply of the drugs to any insane person or to children. It may be noted, though the matter is of no practical moment in the Punjab, that the limit of retail sale for ganja is fixed in this form at $\frac{1}{4}$ of a sér as for bhang, whereas under the Act it must not exceed 5 tolas. It seems to be the practice to consult the wishes of the people before new shops are opened.

Proposal to tax charas and bhang.

615. The question of imposing a duty on charas and bhang, to which reference is made above, has been very fully discussed, and an Act (X of 1893) has been passed in which power has been taken to impose on any intoxicating drug brought by land from beyond the limits of India into any territory to which Act XXII of 1881 extends, or into any specified part thereof, such duty as the Governor-General in Council thinks fit. In pursuance of the provisions of this enactment, it has been proposed to establish golas to which all charas should be taken on entering the province, and which it should be allowed to leave only under a license or pass, for which a fee should be levied at the rate of 8 annas a sér. The revision of the Excise rules so as to give effect to this proposal is under consideration. The taxation of bhang is a more difficult matter owing to the prevalence of the growth of the plant, and the consideration of proposals relating thereto made by the Excise Commissioner has been postponed until the tax on charas has been introduced. The opinion of the Punjab Government on this question is that "in regard to matters of this sort, which involve an interference with ancient and firmly rooted habits of large masses of the people, it is desirable to proceed cautiously, doing one thing at a time."

Central Provinces. Law in force.

616. In the Central Provinces Act XXII of 1881 is in force (see North-Western Provinces).

Supply of the drugs.

617. In this province, however, advantage has been taken of the provisions of the law to prohibit the cultivation of the hemp plant except under license, and licenses are now only given in the Khandwa tahsil of the Nimar district. The plant does not grow wild, and illicit cultivation has for the most part been suppressed. Charas is hardly known. If imported, it pays a duty of Rs. 10 per maund. No bhang properly speaking is produced, but the refuse ganja is used as bhang.

The supply of ganja is amply sufficient for the provincial consumption. Import of ganja from other provinces or Native States is not permitted. There is a certain amount of illicit import from Hyderabad, Berar, Indore, the Bombay Presidency, Gwalior, and the Tributary States of Orissa, and this constitutes the principal difficulty of the ganja administration in this province. A little bhang is imported from the North-Western Provinces under passes.

Khandwa ganja.

618. The harvesting of the crop in the Khandwa tahsil is supervised by a special establishment, and the cultivators are bound to bring the whole of their produce to a Government storehouse at Khandwa. The drug is purchased at the storehouse by the wholesale vendors of the province, the terms of the purchase being arranged between the cultivators and the wholesale vendors without interference on the part of Government. Wholesale vendors of other parts of British India and foreign dealers are also freely permitted to buy. No direct tax is imposed on cultivation, but the following fees are payable at the storehouse:—

(1) A storage fee of 6 pies per maund per mensem payable by cultivators or purchasers of ganja kept in the storehouse. Cultivators and wholesale vendors of ganja in the Central Provinces are exempted from payment of this fee for 30 days.

(2) Permit fees at Re. 1 per maund payable by all purchasers of ganja, other than Government licensed vendors, on account of all ganja for which permission to purchase is granted.

(3) Registration fees at Re. 1 per maund payable by all purchasers of ganja, other than Central Provinces licensed vendors, on account of all ganja of which the transfer by sale is registered.

Wholesale vend.

619. The sole monopoly of wholesale vend in the province is granted by licenses to wholesale vendors approved by the Excise Commissioner. The licenses are given either for a district or for each tahsil. Tenders are invited annually for the licenses for wholesale vend, and the tenders must state what fee per sér, in addition to a direct duty of Rs. 2 per sér (except in Sambalpur and the south-east part of the Raipur district, where it is Re. 1 per sér), the applicants are prepared to pay for the privilege. The wholesale vendor is required to supply the retail vendors with ganja at Rs. 3 per sér (Rs. 2 in Sambalpur and the south-east part of the Raipur district). The ganja purchased by the wholesale vendor is conveyed under a transport pass or import license to a storehouse belonging to the licensee at the district or tahsil head-quarters, one key of which is kept by the Tahsildar, by whom it is issued according to the requirements of the wholesale vendor. Duty is only charged on cleaned ganja, the refuse being destroyed both at the Government storehouse at Khandwa and at the district or tahsil storehouse.

Retail vend.

620. The monopoly of retail vend is usually auctioned separately for each shop, except in large towns, where the shops are generally sold to one person. The localities of all shops are fixed by the Deputy Commissioner subject to the control of the Excise Commissioner. All retail vendors are entitled to be supplied with ganja by the wholesale vendor at Rs. 3 per sér, and may charge their own retail price to consumers. The number of shops is regulated by the demand for the drug. In those districts which are specially exposed to smuggling from foreign States, shops are licensed more freely.

Every wholesale vendor of ganja is given a license for the retail vend of bhang free of charge. Licenses for retail vend of bhang are not granted to other persons, and no wholesale vendor may import without a written permit from the Deputy Commissioner. A duty of Rs. 2 per sér is levied on all foreign bhang sold, and the rate of sale to the public must not exceed Rs. 3 per sér. Stocks of bhang are kept under control in the same way as ganja.

Consumption on the premises is prohibited by a clause in the retail licenses. There is no restriction as to the persons to whom ganja or bhang may be sold. Local opinion as to the opening of shops is not ordinarily taken, but objections, if raised, are considered.

Statistics.

621. The average area of ganja cultivation at Khandwa during the past five years has been 785 acres; the average outturn about 8,000 maunds, of which about 5,000 have been exported and 1,000 consumed in the province, the remainder having been destroyed as unfit for sale. The revenue derived from this source has been Rs. 2,18,000, of which Rs. 1,36,500 has been from license fees, and

the rest from fixed duty. There is no revenue from charas, and from bhang only about Rs. 1,000.

Madras. Law in force.

622. The Madras Abkari Act (I of 1886) contains extensive provisions for the control of the cultivation of hemp, and the manufacture, sale, and possession of hemp drugs. But as it has only been brought into force in the Presidency in so far as it relates to the sale of intoxicating drugs, there is no need in describing the system at present in force to refer to any of the other provisions.

The principal provisions in force are as follows :—

No intoxicating drug may be sold without a license from the Collector, provided that a cultivator or owner of any plant from which an intoxicating drug is produced may sell without a license those portions of the plant from which the intoxicating drug is manufactured or produced to any person licensed under the Act to sell, manufacture, or export intoxicating drugs (section 15).

The Governor in Council may grant to any person or persons on such conditions and for such period as may seem fit the exclusive or other privilege—

(1) of manufacturing by wholesale, or

(2) of selling by retail, or

(3) of manufacturing or supplying by wholesale and selling by retail,

any intoxicating drugs within any local area. A license from the Collector is necessary for the exercise of such privilege (section 16). It may be noted here that there is no definition in the Act of wholesale and retail, and that no such definition exists in any notification under the Act.

A duty shall, if the Governor in Council so direct, be levied on all intoxicating drugs sold in any part of the Presidency of such amount as the Governor in Council may from time to time prescribe (section 17).

Such duty may be levied by fees on licenses for manufacture or sale (section 18).

Every license or permit granted under the Act shall be granted—

(*a*) on payment of such fees, if any,

(*b*) for such period,

(*c*) subject to such restrictions and on such condition, and

(*d*) shall be in such form and contain such particulars,

as the Governor in Council may direct either generally or in any particular instance in this behalf (section 24).

The Governor in Council may from time to time frame rules for the warehousing of intoxicating drugs, and for the removal of the same from any warehouse in which they are deposited for deposit in any other warehouse or for local consumption or export; and for placing the storage of intoxicating drugs under such supervision and control as may be deemed necessary for the purposes

of the Act; and generally to carry out the provision of the Act or of any other law for the time being in force and relating to abkari revenue (section 29).

No rules have been framed under section 29 and no notifications issued with reference to any of the above quoted provisions of the Act relating to intoxicating drugs except such as relate to the delegation of powers and the extension to local areas of those provisions.

Supply of the drugs.

623. The hemp plant does not grow wild in the plains of Madras, and even in the hills there does not seem to be much spontaneous growth. But a few plants will be found in the enclosures of houses in several parts of the province, and there is systematic cultivation of the plant for ganja in the Kistna and North Arcot districts, and to a smaller extent in some others. Accurate information regarding the area under cultivation is not available, but the amount of regular cultivation accepted by the Commission is 350 acres. From this cultivation ganja is produced and bhang is collected, though statistics of bhang separate from those of ganja are not available, and the bhang of this province is probably in many cases only refuse ganja. Charas is not known.

Ganja is said to be imported in small quantities from the Hyderabad, Bastar, and Banganapalle States, and exports made to Ceylon, Mysore, Hyderabad, and Cochin territory. From other sources it has been ascertained that there is a considerable quantity of Madras ganja smuggled to Burma and Mysore, and that the administration of this branch of excise in the latter tract is thereby rendered difficult. Apart from smuggling, the exports of ganja from Madras to Mysore amounted to 1,829 local maunds (equal to 552 Indian maunds) in 1892-93. This alone represents a considerable area of cultivation; and, judging from the consumption within the Presidency, it appears probable that the area of cultivation has been under-estimated.

System of excise.

624. The only system of administration which exists in regard to the hemp drugs consists in the restriction of the sale of these drugs to licensed vendors (with the proviso contained in section 15), and no limit of retail sale having been fixed, any person may purchase any quantity of the drugs from a licensed vendor.

Up to 1st April 1891 licenses for sale were granted on payment of fixed fees, and the amount realised from these fees was in the year 1890-91 Rs. 8,805 as compared with Rs. 4,890 the previous year. In 1891-92 the system of selling the licenses by auction was introduced, and the amount realised was Rs. 54,989. In 1892-93 it was Rs. 47,292.

The number of shops is determined by the Collector, subject to the Board's approval, and no increase can be sanctioned without the special orders of the Board obtained in each case. No form of license is to be found in the Madras Excise Manual.

There are only 246 retail licenses for the whole Presidency, or one shop for 144,781 of the population. The evidence shows that a good deal of the consumption does not pass through the shops, and that in certain tracts the drug passes freely from the cultivator to the consumer.

625. The system of administration is based upon the Bombay Act V of 1878, and rules and notifications thereunder. The principal provisions are as follows :—

Bombay. Law in force.

Import of intoxicating drugs into any part of the Presidency is prohibited save under permit and after payment of duty, if any. If the drugs have paid customs duty, this provision does not apply (section 9).

Export is prohibited save under the same conditions. This provision does not apply to drugs imported by sea, the export of which is permitted on payment of any fee or duty, if any, leviable by law on its transhipment or exportation (section 10).

Transport of any quantity of intoxicating drugs exceeding 40 tolas is prohibited save under permit (section 12).

Manufacture is prohibited save under license (section 14).

Sale is prohibited save under license : provided that no such license is necessary for the sale by a cultivator or owner of any plant from which an intoxicating drug is produced of those portions of the plant from which the intoxicating drug is manufactured or produced to a licensed vendor, manufacturer, or exporter (section 16).

The maximum quantity which may be sold by retail at one time or to one and the same person in the aggregate on any one day within any defined local area or place is half an Indian sér or 40 tolas (section 17 and notifications thereunder).

Whenever a license is granted for the manufacture or sale of any intoxicating drug, and whenever the import, export, transport, or removal from place to place of any intoxicating drug is permitted, such duty shall be levied as the Collector, acting under the general or special order of Government, thinks fit (section 27).

Under this section notifications have been issued prescribing that the duty leviable on account of a license for the joint privileges of manufacture and retail sale of intoxicating drugs shall be fixed by the Collector, who before granting any such license shall put up the said privileges to auction.

For a permit for the import or export of any intoxicating drug, or for its transport between any two places not situated within the same district, duty subject to certain exemptions is levied at the following rate :—

	Rs.
If the amount does not exceed 10 Indian maunds	5
For every additional 2 Indian maunds or fraction thereof ...	1

Every license, permit, or pass granted under the Act is granted—

(*a*) on payment of such fees, if any,

(*b*) for such period,

(*c*) subject to such restrictions and on such conditions, and

(*d*) shall be in such form and contain such particulars as Government directs (section 30).

Sources of supply in Bombay.

626. The wild plant is not much found in Bombay. There is cultivation of hemp for the production of ganja in a few districts, principally in Ahmednagar and Satara. The average for five years is 874 acres. The cultivator has to obtain a permit, for which no fee is levied, to enable him to dispose of his produce. The Excise Commissioner states that the cultivation is noted and watched by the village officers, and he cannot dispose of his crop without obtaining the necessary permit. There is not much evidence of the cultivation of plants in homesteads and enclosures for private use, but Mr. Sinclair, Collector of Thana, alludes to such cultivation as occurring in many private gardens. The amounts of imports of ganja from other provinces given in the statistics supplied by the Commissioner of Excise show an average for the last ten years of 1,820 maunds, and that officer in his memorandum states that the imports are chiefly from the Central Provinces. In view of the evidence the figures seem excessive, and a doubt suggests itself to the Commission whether imports from district to district have not been included.

Charas is imported in very small quantities from the Punjab. Except in the City of Bombay, it is hardly known. Bhang is produced to a small extent in Gujarat and Palanpur. It is imported from Ujjain. The average imports for the last ten years amount to 87 maunds, but not much reliance can be placed on these figures. Probably wherever the hemp plant is grown for ganja, a certain amount of bhang is also produced.

Bombay is intersected with a large number of Native States, in some of which ganja is grown. The illicit import of this ganja does not seem to be very extensive, but owing to the cheapness of the drug in these States, and to the high maximum of legal possession (40 tolas), it is inevitable that a certain amount of smuggling should take place, and this is considered to be the case by several witnesses.

System of vend in Bombay.

627. The rules provide that the joint privilege of manufacture and retail sale at one or more shops shall be auctioned. The vendors are the only importers of the drugs, and there are no wholesale dealers acting as middlemen between the cultivators and the farmers of retail vend. The farmers pay import and transport duties as above described. As a rule the farm of the drugs for a whole district is sold to a single vendor. The retail shops are usually fixed by the Collector. The total number of retail licenses has been very constant for some years, the average for the last ten years being 373. The number of shops, however, is larger, averaging 647 for the last ten years. The form of retail license contains no provision regarding consumption on the premises, nor regarding the persons to whom the drugs may be supplied. There is no fixed rule regarding "local option." In some districts it is attended to carefully. Any representation by the inhabitants would have full consideration, but representations relating to the location of shops are seldom received.

Sind.

628. The system of administration in Sind is in almost every respect the same as in Bombay, but there is some difference in the conditions. Neither ganja nor charas are produced, and the consumption of both is not large, though that of the latter

is nearly, if not quite, equal to that of the former, and is said to be increasing. Ganja is imported from Panvel in Bombay, and charas from the Punjab. There is cultivation of hemp for bhang chiefly in Shikarpur and Karachi, averaging about 300 acres. The annual consumption of bhang is upwards of 4,000 maunds. There is a little smuggling of bhang from the Khairpur State, where it is grown and sold cheaper than in Sind.

Aden.

629. Aden is supplied with hemp drugs entirely from Bombay.

Berar.

630. The Abkari rules in Berar appear to rest upon the authority of a letter of the Government of India in the Financial Department, No. 3541, dated 10th October 1873. Berar is not British territory, and the rules constitute a special local law issued by the Governor-General in Council in virtue of specially acquired jurisdiction. Cultivation is prohibited except under license, and Rs. 10 per acre or part of an acre is levied on all cultivation. The area cultivated for production of ganja is confined to the Akola, Buldana, and Amraoti districts, and amounted in 1892-93 to 85 acres. The village officials are required to destroy any plants of spontaneous growth, and this growth appears to be kept under. Ganja is imported from Khandwa, and sometimes from Khandesh. About 1,300 maunds are consumed annually. Charas is not used. No information is given regarding bhang apart from ganja, and the bhang consumed is probably that produced locally in connection with the ganja cultivation. The monopoly of vend has been hitherto sold by auction to farmers together with that of opium. This is the only taxation besides the rate on cultivation. For the future separate drug shops are to be opened. The maximum amount for retail sale is 20 tolas for ganja and bhang and 5 tolas for charas. There is no limit for legal possession. There is nothing in the nature of local option, but objections to shops are considered. The average retail price of ganja is from Rs. 2 to 2-8 per sér.

Ajmere, Coorg, and Quetta-Pishin.

631. In these three small administrations Act XXII of 1881 is in force. There is a little cultivation in Ajmere, but none in Coorg or Quetta-Pishin. The contract system prevails, and the monopoly of vend is sold by auction or by tender. The amount realized is the only source of revenue. Shops are licensed, and the drugs are sold at the retailer's prices.

Summary of systems.

632. The following is a summary of the prominent features of the excise administration of the hemp drugs in the principal provinces (except Burma) :—

Bengal.—Cultivation and manufacture of ganja controlled. Smuggling rare, except in Orissa. Ganja and charas highly taxed. Bhang little controlled.

Assam.—No cultivation of ganja permitted. Illicit cultivation rare. Some smuggling of an inferior kind of ganja from the hill tracts. Ganja highly taxed. Charas not used. Bhang little controlled.

North-Western Provinces.—Cultivation and manufacture not prohibited. Some ganja produced in the province. Supply of ganja

derived from Bengal, Central Provinces, Gwalior, and Bundelkhand. Little smuggling from Native States. Charas imported mainly from the Punjab. A little charas produced in Kumaon and Garhwal, and a small quantity imported from Nepal. Bengal ganja bears the tax imposed in that province. Other ganja and charas hardly taxed. Bhang not controlled.

Punjab.—Ganja not used. Charas imported from Central Asia not smuggled, but hardly taxed, there being no direct duty, of which, however, the imposition is under consideration. Bhang not controlled.

Central Provinces.—Cultivation and manufacture of ganja controlled. Smuggling from Native States and adjoining Bombay territory not wholly suppressed. Taxation of ganja fairly high—of charas light. Local bhang controlled as ganja. Foreign bhang highly taxed.

Madras.—Cultivation and manufacture not controlled. Ganja produced to a considerable extent. Taxation very light, there being no direct duty, and licenses being very few. Charas not used. Bhang little known. Few statistics available.

Bombay.—Cultivation and manufacture not controlled. Ganja produced to a considerable extent. Amount imported uncertain. Taxation light, there being no direct duty beyond import duty of 8 annas per maund. Charas hardly used, except in Sind. Bhang little known.

Berar.—Cultivation and manufacture controlled. Production of ganja not large, but imports from Khandwa considerable. Taxation light, there being no direct duty beyond a tax on cultivation of Rs. 10 per acre or part of an acre.

CHAPTER XVI.

PROVINCIAL SYSTEMS EXAMINED.

Scope of this Chapter.

633. In Chapter XIV the Commission dealt with the general policy which, in their opinion, should regulate the excise administration in respect of hemp drugs, and in Chapter XV they have described the systems at present existing in British India. They will now offer some remarks regarding the measures necessary to give effect to that policy, and will then proceed to examine the existing systems in the light of these remarks, adding their recommendations where change of any kind seems desirable.

Farm of monopoly of vend not sufficient.

634. The simplest method of dealing with the subject is to farm the monopoly of vend, leaving the lessee to make his own arrangements for a supply of the drugs and their sale to the public. This is the system (with some slight differences) which is in force in the North-Western Provinces, the Punjab, Madras, Bombay, and the minor administrations. It has the advantage of relieving the Government of all responsibility or interest in the matter beyond the disposal of the farms. It secures a preventive agency of a non-official kind for dealing with illicit sale and smuggling; and if proper care is taken to appoint respectable vendors to prevent combinations for the purpose of keeping down the price of the farms, and to license shops only when they are required by the local demand, such a system may appear to be successful and sufficient. But there are some serious objections to it. In the first place, it has the disadvantage of exercising no control over the production and consumption. Large profits do not depend upon the price being raised to the pitch necessary to check excess; they are as easily realised by large sales at low rates. Thus consumption may very probably be unduly stimulated. Secondly, the Government acquires no accurate information regarding the extent of the production, the sources of supply, and the increase or decrease of the habit of using the drugs. The Commission think it is the duty of the Government to acquire this information. Thirdly, the system leaves the whole revenue and consequent check on consumption at the mercy of competition, which is a very unsafe regulator. And, lastly, direct taxation has already been resorted to in some cases with good results, whereas in provinces where only the license system prevails control is insufficient and taxation inadequate.

Combination of direct duty with auction of licenses the best system.

635. In the opinion of the Commission, the combination of a fixed duty with license fees for the privilege of vend constitutes the best system of taxation for the hemp drugs. It is the system which prevails in regard to spirituous liquors produced in India, and is equally applicable to other intoxicants, in regard to which a policy of control and restriction is necessary. Unless there are special reasons to the contrary, the Commission think that the monopoly of vend should be auctioned. The special advantage of doing this lies in the fact that a method is thus secured of adjusting the total incidence of taxation to special circumstances, such as the local demand, the expense of carriage, the facilities for smuggling, the habits of the people, and the price of other intoxicants.

The danger of relying mainly on the auction system as a check on consumption is that a combination, or the absence of competition, among the vendors might at any time destroy its efficiency. The fixed duty should therefore be as high as possible, due regard being paid to the considerations mentioned in Chapter XIV, paragraph 586. When this is done, the auction of licenses for vend will come in as a valuable adjustment, and, if properly worked, will indicate whether the limit of taxation has been reached. If the proceeds of the auction sales of licenses have a decided tendency to increase, this will be an indication that the fixed duty will bear an increase.

Control of cultivation.

636. But besides that which results from adequate taxation, another method of restricting consumption is available to the Government in the limitation of the sources of supply. And the most effective way of doing this, at all events in the case of ganja, is to prohibit cultivation of the hemp plant, except under license, and to grant licenses for cultivation in such a way as to secure supervision and registration of the produce. Unless this is done, it is impossible to have any idea of the extent of consumption. The opinions formed from time to time in regard to this matter in provinces where cultivation is not controlled are mere guesses doomed to be falsified. It is of the greatest importance that this control should be exercised. In regard to charas, the only way of limiting the supply is by taxation, and the conditions of the trade are such that the supply can be completely regulated by the application of this method. Where the hemp plant grows spontaneously in abundance, the supply of bhang cannot be regulated, but in other places there is no reason why its cultivation should not be placed under the same restrictions as that of ganja, and a direct duty, which must be light in proportion to the facilities for importing the drug free of charge, imposed. The subject will be referred to again further on.

Limitation of shops.

637. Another most effective way of reducing the sources of supply is by keeping the number of licensed shops to the lowest limit compatible with meeting the real demand. The increase of shops or failure to reduce them has often been pointed out as an error committed by individual district officers whose aim was too much to raise revenue. The impropriety of this and its danger cannot be too strongly insisted upon. The matter is one which should be kept constantly in view by the Local Governments and by the Government of India.

Artificial checks not desirable.

638. The Commission do not, however, advocate any attempt to restrict the supply of the drugs by an artificial check, such as limiting cultivation of ganja or import of charas, with reference to an ascertained or computed average demand. It is not for the Government to determine how much of the drugs should be consumed. Its function is to exert pressure, but not to fix limits; to regulate the conditions, but not the actual quantity; and it is far better that, subject to those conditions, the laws of supply and demand should not be interfered with.

Prices of the drugs.

639. The incidence of taxation in different provinces ought not *cæteris paribus* to vary greatly. The following table shows the retail prices per sér prevailing in the different provinces:—

	Ganja.				Charas.				Bhang.			
	Minimum.		Maximum.		Minimum.		Maximum.		Minimum.		Maximum.	
	Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.	
Bengal	12 0 0		30 0 0		35 0 0		40 0 0		1 0 0		6 0 0	
Assam	15 0 0		40 0 0		...		...		...		...	
North-Western Provinces.	2 8 0		30 0 0		7 8 0		40 0 0		0 4 0		1 0 0	
Punjab... ...	...		...		4 0 0		15 0 0		0 2 0		0 8 0	
Central Provinces	5 0 0		10 0 0		...		...		Not given			
Madras ...	1 4 0		4 2 8		...		...		0 6 8		3 5 4	
Bombay ...	0 6 0		5 0 0		...		...		0 8 0		3 0 0	
Sind... ...	6 6 0		10 0 0		15 0 0		30 0 0		1 0 0		1 4 0	
Berar ...	2 0 0		2 8 0		...		...		0 8 0		0 8 0	
Ajmere ...	4 0 0		5 0 0		16 0 0		20 0 3		0 8 0		1 0 0	
Coorg... ...	0 14 0		1 0 0		...		...		Not given			
Quetta-Peshin ...	7 8 0		7 8 0		20 0 0		20 0 0		1 0 0		1 0 0	

The figure given as the maximum for ganja in the Central Provinces is not the true maximum. It is "the average retail price in most districts for small quantities of ganja." The maximum must, therefore, be higher. In Jubbulpore, the Commission found that in some shops ganja was selling at Rs. 12 per sér. The maximum for the province is not available. A maximum quotation of 4 annas per tola, equal to Rs. 20 per sér, is given for Ganjam in Madras: this may be Rajshahi ganja. Bhang is said to reach a maximum price of Rs. 10 per sér in the same district. In Malabar, Vellore ganja is said to reach 4 annas per tola, but the maximum price in North Arcot is 4 pies. Wynaad ganja in the same district is said to reach a maximum price of 2 annas per tola. With these exceptions, no district shows a higher maximum price than that given in the statement.

It is evident that if the systematic treatment advocated by the Commission is to be applied, some means must be taken, especially in regard to ganja, of removing the extraordinary inequalities disclosed by this comparison. Up to year 1892-93, notwithstanding the high price of Rajshahi ganja, the cost of the daily average allowance of liquor to the habitual consumer in Bengal is, according to the memorandum, much higher than in the case of ganja. Judged by this test, there is room even in Bengal for increased taxation. *A fortiori* is this the case in other provinces except Assam. No doubt the quality of the drug varies in different provinces, but there is nothing in the analysis of the different kinds of ganja which points to such marked discrepancies in the price. And the general conclusion which must be drawn from these figures is that in all the provinces, except Bengal and Assam, taxation is totally inadequate to the due restriction of consumption. The same may be said of charas. As regards bhang, many witnesses are of opinion that there is no need to impose the same restrictions upon its consumption as

in the case of ganja and charas, and the difficulty of doing so in the Himalayan region is considerable. But the Commission concur with the majority of the witnesses in thinking that the same general principles apply, and that, so far as may be possible, this product of the hemp plant should be brought under more efficient control and taxation.

Ganja administration in Bengal.

640. A historical sketch of the ganja administration in Bengal from the year 1790 will be found as an appendix to the Excise Commissioner's Memorandum. From the first the object of the measures taken was "to check immoderate consumption and at the same time to augment the public revenue." Up to the year 1853 hemp drugs were taxed by means of a daily tax on their retail sale paid monthly. From 1824 to 1847 it was usual to farm out the excise revenue of entire districts. From 1853 the daily tax was abolished, and a duty of Re. 1 per sér was imposed. The retail vendor had to pay the full amount on a specified quantity in each month whether he took it all or not. In 1860-61 a fixed fee of Rs. 4 per mensem was levied for each ganja license, in addition to the duty at the prescribed rate, on all quantities passed to the shop for retail sale, the rule regarding the quantity to be taken by each shop being withdrawn. This was the beginning of the combined fixed duty and license fees system which at present exists. In 1876 the system of selling licenses by auction was introduced, and this has continued to the present time. The following table shows the operation of the action taken by the Bengal Government since the time when the auction of license fees was introduced :—

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Quantity of Ganja.			Revenue on all Ganja passed into consumption, except that exported to Assam and Kuch Behar.						Rate of Duty.			
Year.	Area cultivated in acres.	Exported to other Provinces and Native States.	Sold retail in the province.	On which duty was realised.	Fixed duty.	License fees.	Total.	Total taxation per sér average.	Number of retail licenses.	Population per retail license.	Chur.	Round.	Flat.	Remarks.
		Mds.	Mds.	Mds.	Rs.	Rs.	Rs.	Rs. A. P.			Rs. A. P.	Rs. A. P.	Rs. A. P.	
1876-77 ...	605	744	6,716	7,459	7,73,458	4,23,658	11,97,116	4 0 2	3,128	19,309	4 0 0	3 0 0	2 8 0	The rates of duty on ganja passed into consumption in the Orissa Division were fixed at a lower figure from the year 1882-83.
1877-78 ...	701	1,562	8,052	8,197	8,73,891	5,11,766	13,85,657	4 3 7	3,247	18,606	...	...	...	
1878-79 ...	482	568	5,115	5,462	8,04,291	5,41,436	13,45,727	6 2 6	3,244	18,629	4 0 0	4 0 0	3 8 0	
1879-80 ...	463	965	4,872	5,137	7,61,494	5,28,669	12,90,163	6 4 5	3,210	18,843	...	...	...	
1880-81 ...	745	948	5,338	5,600	8,28,117	6,26,557	14,54,674	6 7 11	3,411	19,337	...	...	...	
1881-82 ...	954	1,038	5,937	6,431	9,58,159	7,55,632	17,13,791	7 7 4	3,488	19,091	...	...	...	
1882-83 ...	664	1,043	5,223	5,646	10,65,274	7,95,223	18,60,497	8 1 3	3,271	20,358	5 0 0	5 0 0	4 8 0	Column 3 does not include exports by sea. The figures for such exports, which are only available for five years, are—
1883-84 ...	831	1,545	5,200	5,881	11,28,937	8,44,776	19,73,713	8 6 3	3,298	20,191	...	...	...	
1884-85 ...	671	1,370	5,117	5,798	11,25,183	8,62,417	19,87,600	8 9 1	3,196	20,835	...	...	...	
1885-86 ...	454	1,446	4,906	5,718	10,85,636	8,60,991	19,46,627	8 8 2	3,033	21,955	...	...	...	
1886-87 ...	730	1,678	5,342	6,264	11,85,033	8,90,646	20,75,679	8 4 6	3,046	21,862	...	...	...	
1887-88 ...	593	1,673	5,679	6,550	13,09,126	9,35,894	22,45,020	8 2 3	2,949	22,619	6 8 0	6 4 0	4 8 0	
1888-89 ...	811	1,779	5,415	6,413	13,66,289	9,52,064	23,18,353	9 0 7	2,922	22,828	...	...	...	
1889-90 ...	803	1,688	5,237	6,101	12,89,077	9,70,613	22,59,690	9 4 2	2,819	23,662	7 0 0	6 4 0	4 8 0	
1890-91 ...	890	1,624	5,306	6,996	13,10,085	10,01,628	23,11,713	9 7 8	2,586	25,794	...	...	...	
1891-92 ...	438	1,580	4,996	5,678	12,48,065	10,44,503	22,92,568	10 1 6	2,578	27,568	7 0 0	6 4 0	5 0 0	
1892-93 ...	1,180	1,510	4,711	5,451	12,80,631	11,05,435	23,86,066	10 15 1	2,672	26,673	...	...	...	
1893-94 ...	...	...	...	...	...	...	...	...	...	...	8 0 0	7 4 0	6 0 0	
1894-95 ...	...	...	...	...	...	...	...	...	...	...	9 0 0	7 8 0	7 4 0 6 0 0	

	Mds.
1888-89	... 536
1889-90	... 526
1890-91	... 423
1891-92	... 1,179
1892-93	... 492

641. This table shows that up to the year 1892-93 on five occasions some increase was made in the rate of fixed duty. The revenue steadily increased, until at the end of the period it was double as much as in 1876-77; notwithstanding this, the number of retail licenses after the first period of six years steadily diminished up to the year 1891-92, though in the following year there was an increase. The result is that the number of the population per retail license increased by 38 per cent. in the whole period. The increase in the total average taxation per sér of the taxed drug increased from Rs. 4-0-2 to Rs. 10-15-1. As regards the area cultivated (column 2), it has to be remembered that these figures represent the growth of the plant for consumption in Assam, the North-Western Provinces, and some Native States as well as Bengal. The figures in column 4 represent the ganja actually consumed in Bengal, which has decreased largely since the first two years, and since then has been nearly stationary.

Results obtained.

In addition to the above facts, the evidence before the Commission tends to show that, except in Orissa, where the Garhjat ganja competes with the Rajshahi ganja, smuggling does not prevail in any part of the province; also that ganja is still the cheapest form of intoxicant, and that there is no evidence to lead to the belief that it is being displaced in Bengal by more noxious stimulants. The Bengal Government seems to have kept in view with the most successful results the principles which have been enunciated in Chapter XIV, paragraph 586, of this Report as essential to an efficient excise system, and to have intervened, when occasion demanded, to restrict the use of the Rajshahi ganja by administrative control and enhanced taxation. The effect of the enhancements which have been made since the year 1892-93 cannot be gauged, but the Commission have no hesitation in saying that this part of the excise administration in Bengal is being most carefully and ably supervised.

Weak points in Bengal system.

642. The weak points in the Bengal administration are—

(1) The defective arrangements for storage of the Rajshahi ganja.

(2) The smuggling into Orissa of the produce of the Tributary Mahals.

643. The Bengal Excise rules provide that the cultivator must send into the public gola all the ganja he manufactures, and private golas are only permitted in the case of a cultivator who can satisfy the supervisor that he has a secure private place of his own. It has been shown above (paragraph 595) that there is no public gola for the storage of the crop, and that all the produce is stored in private golas. The opportunity for smuggling thus afforded has not escaped the notice of the authorities. In his report on the cultivation of and trade in ganja, 1877, Babu Hem Chunder Kerr (paragraph 131) dealt with the question, and recommended the absolute prohibition of private storage and the establishment of public godowns where the drug might be warehoused in bond. He was of opinion that six storehouses 125 feet × 20 feet, three of which should be at the sadar station of Naogaon and three at three outposts, would be sufficient to warehouse the crop. The Board of Revenue did not support the proposal, remarking that it would involve a very radical change in the existing system, and would also necessitate a very considerable expenditure on the part of Government in the construction of the necessary warehouses. The absence of any

Storage.

evidence as to extensive smuggling was mentioned as obviating the necessity for the measure. In 1892 the Board were of opinion that the objections to public golas appeared to be insuperable. Mr. Lyall in his evidence says that the storage arrangements can be improved, but that under existing circumstances it would be impossible without enormous expenditure to have a public gola. Mr. Gupta, Excise Commissioner, says that the "difficulty of having a public warehouse is that the ganja stored in it would consist of numerous parcels, all belonging to different individuals, and this would lead to much confusion. Again, the drug has to be frequently aired, turned out, and handled in order to keep it in good condition, and it is next to impossible to secure this periodical examination when the ganja is stored in public golas situated at a distance from the houses of the cultivators." He therefore considers the scheme "impracticable," on which Mr. Lyall notes: "Rather, I would say, too costly." Mr. Price, Collector of Rajshahi, does not recommend public golas because Government servants would not take care of the ganja as the owners would. But he does not think there would be any great difficulty if there were several Government golas situated in central places, though he does not think the cultivators would view the change with favour. He concludes by saying that he sees no great objection to the plan; and adds: "You cannot have a perfect system without Government golas." Babu Hem Chunder Kerr retains his former opinion in favour of the system, which is also advocated by Ganendra Nath Pal, Sub-divisional Officer, Naogaon, and Abhilas Chandra Mukharji, Excise Inspector. The Commission have formed the opinion that the objections are not insuperable, and that the system of Government storehouses should be introduced. The example of the Central Provinces system seems to prove its practicability, and they are of opinion that it would have the effect of bringing about the speedy conclusion of bargains between the cultivator and the wholesale dealer, in which case the main difficulty would be removed. The expense of erecting several godowns should not, in their opinion, operate to prevent the measure considering the very large revenue at stake and the great desirability of removing the existing temptations to illicit dealing. The matter should, however, be left to the discretion of the Local Government.

Smuggling in Orissa.

644. The smuggling of ganja from the Tributary States of Orissa into British territory has a long history, and more properly belongs to the general subject of excise administration in Native States, which will be dealt with further on.

Reduction of all ganja to chur.

645. The proposal of the Excise Commissioner to abolish flat and round ganja and have only chur is one that deserves notice. He explains rather more clearly in his evidence that what he advocates is not the compulsory production of chur, but the adoption of the chur rate of duty which is the highest for all ganja, which would result in the elimination of stick from the produce, and consequent reduction of the whole stock to chur. There are obvious advantages in having one rate of duty, but other considerations enter into this subject, such as the question as to the form in which the drug can best be packed and transported without deterioration. The experiments which are being conducted in connection with this question are still incomplete. The Commission feel that the matter is one for the Local Government to decide. It is mentioned here because

it would materially reduce the bulk of the produce and make the introduction of public golas more easy of accomplishment. The plan is also advocated by some subordinate Excise officers and Deputy Collectors.

Ganja administration in the Central Provinces.

646. The present system of ganja administration in the Central Provinces has been in force since 1882-83, previous to which there were several changes, which may be briefly recapitulated. In 1871-72, the first year during which Act X of 1871 was in force, the monopoly of vend of drugs (which included madak) was put up to auction for each district as a whole, or for smaller areas, and knocked down to the highest bidder. The contractors were free to make their own arrangements for obtaining the drug from cultivators, and cultivation was free. In 1873-74 the Local Administration had to consider complaints by the retail contractors to the effect that the extensive cultivation of ganja for home consumption by private individuals seriously interfered with their profits, and prevented them from paying to Government as high a revenue as they otherwise might. Meanwhile the Government of India had issued instructions to all Local Governments to discourage the consumption of ganja and bhang as far as possible by placing restrictions on their cultivation, preparation, and retail, and imposing on their use as high a rate of duty as could be levied without inducing illicit practices. Accordingly, in April 1875, rules were introduced prohibiting cultivation except under license, for which the levy of an acreage fee was authorised, and embodying other provisions for inspection of stocks and licenses to cover the possession of the produce until its purchase by the licensed vendor. The acreage fee was fixed soon afterwards at Re. 1, and in 1876-77 a special penal fee of Rs. 10 per acre on unlicensed cultivation was introduced. These acreage fees were, however, pronounced illegal by the Judicial Commissioner in 1878, and new rules were framed providing for the storage of all ganja in Government godowns or in authorised private storehouses and for levy of duty on the drug when removed. The duty was fixed at Re. 1 per sér. Difficulties were experienced in working these rules, the cultivators not being able to dispose of their produce to the licensed vendors. The wholesale vendors held aloof, feeling uncertain of the effect which the enhanced duty might have on consumption, and the retail vendors would not purchase direct from the cultivators. The Local Administration accordingly purchased nearly the whole crop, amounting to some 6,856 maunds, at a cost of nearly Rs. 50,000. The Government of India, however, objected to the creation of a Government monopoly of ganja; so in 1880-81 the monopoly of wholesale vend for the province was granted to a single individual, who agreed to pay a duty of Rs. 2 per sér on all ganja sold by him to retail vendors, and to supply them with the drug at Rs. 3 per sér. It was contemplated in the agreement that the price might be raised by increments of 4 annas to Rs. 4 per sér, and the duty by increments of 3 annas to Rs. 2-12 per sér, within the year 1880-81. At the same time the system of auctioning the monopoly of retail vend by circles was done away with, and monthly licenses were issued at fixed rates, varying according to the size of the town or village, and without limit as to the number of licenses existing in one place. This system, however, was abandoned in the following year, and the auction system was again for the most part introduced. This was the origin of the system of monopoly of wholesale which exists to the present time in the Central Provinces. Since 1882-83, by which time Act XXII of 1881 had become law, the wholesale

monopolist has been called upon to pay a certain amount per sér in addition to the direct duty of Rs. 2 per sér, the rate varying in different districts and being generally determined by tender. Such tender is limited by the necessity of supplying retail vendors at Rs. 3 per sér to an amount per sér less than Re. 1. The object of this measure was to fix the difference between the duty on the drug, Rs. 2 per sér, and the price at which it was to be sold to retail vendors, Rs. 3, at a figure considerably in excess of the cost price of the drug, and to put up the gross profits thereby secured to the wholesale vendor to auction in the form of tender. It was thought that this would practically raise the direct duty in the districts where the cost price of the drug was least, and so equalize prices throughout the province. Cultivation in British territories has been concentrated, and since 1891 it has only been allowed in the Khandwa tahsil of the Nimar district.

Table showing the results of the ganja administration from 1882-83 to 1892-93.

647. During the changes above described there were great fluctuations in the area of cultivation, but the revenue steadily increased. The amount of consumption is not available. From 1882-83 the statistics are more complete, and the tabular statement subjoined will show the progress of the administration in regard to exports and consumption of ganja, the amount and rate of taxation, and the number of shops. Column 2 contains the figures as accurately as possible for the area cultivated; the table appended to the Excise Commissioner's memorandum gives the areas for which licenses were taken out, which were generally in excess of the area actually cultivated. Column 5, showing the fixed duty, represents the Rs. 2 per sér duty levied on all ganja issued to the retail vendors of the province. Column 6 represents retail license fees, and the amounts, called wholesale license fees, obtained in accordance with the tenders of wholesale vendors:—

1	2	3	4	5	6	7	8	9	10	11
Year.	Area cultivated in acres.	Quantity of Ganja.		Fixed duty.	License fees.	Total.	Total taxation per sér (Cols. 4 and 7).	Rates of fixed duty.	Number of retail licenses.	Population per retail license.
		Exported.	Sold (retail) in the province.							
		Mds.	Mds.	Rs.	Rs.	Rs.	Rs. A. P.	Rs.		
1882-83 ...	452	2,241	600	47,935	61,676	1,09,612	4 9 1	2	814	11,344
1883-84 ...	834	5,551	757	59,664	68,141	1,27,805	4 3 6	2	851	10,851
1884-85 ...	1,166	4,790	845	66,123	94,491	1,60,614	4 12 0	2	921	10,026
1885-86 ...	1,659	13,380	1,005	77,508	1,13,272	1,90,780	4 11 11	2	956	9,659
1886-87 ...	928	6,052	864	69,473	1,40,859	2,10,332	6 1 4	2	1,026	9,000
1887-88 ...	524	4,227	831	65,244	1,23,350	1,88,594	5 10 9	2	1,026	9,000
1888-89 ...	915	5,052	941	74,191	1,24,054	1,98,244	5 3 10	2	1,081	8,543
1889-90 ...	954	7,933	971	74,836	1,25,770	2,00,606	5 2 8	2	1,078	8,566
1890-91 ...	477	4,108	1,019	78,205	1,32,709	2,10,914	5 2 10	2	1,081	8,596
1891-92 ...	963	3,916	1,156	88,613	1,38,875	2,27,488	4 14 10	2	1,053	8,951
1892-93 ...	984	4,232	1,194	91,629	1,61,141	2,52,770	5 4 8	2	1,047	9,552

Review of Central Provinces system.

648. It will be seen from this statement that the fixed duty of Rs. 2 per sér has not been raised since 1882-83. As above remarked, an increase was contemplated as far back as 1880-81. In 1887 the Local Administration declined to raise the duty, the principal reason assigned being that the effect would be to lower the bids for retail vend monopolies. The total taxation per sér of consumption has slightly decreased

since 1887-88. The local consumption shows a tendency to increase. The number of shops per head of population has on the whole increased; and, although the revenue has increased, this is due partly to increased consumption, and partly to keener competition in the auction sales of licenses.

The basis of good administration has been laid, but progress has not been secured, and to this result it is essential that attention should now be directed.

Ganja exported to other provinces and Native States should pay duty.

649. One important defect of the system is that exported ganja is very lightly taxed. In regard to this subject, the Excise Commissioner in 1887 remarked: "The part played by the Khandwa store as an *entrepôt* for the supply of the ganja demand of those provinces (the Central Provinces) is quite insignificant when compared with its use as a mart for the convenience of foreign purchasers. To it throng traders from Bhopal, Indore, Gwalior, Rutlam, Dhar, Jodhpur, Udaipur, Rewa, Panna, Baroda, and other States of less note; and licensed vendors from the North-Western Provinces compete with contractors from Berar for the purchase of the cultivators' stock. Between 6,000 and 7,000 maunds of ganja have on the average of the last four years been annually exported from Khandwa to other provinces and Native States." Since these words were written the permit and registration fees have been imposed, and all the exported ganja pays something before being removed for export. But besides a small fee for storage, Government licensed vendors exporting to the North-Western Provinces or other British provinces only pay Re. 1 per maund by way of registration fees, and foreign purchasers only pay Rs. 2 per maund for permit and registration fees. An instance is here afforded of the necessity of the systematic treatment advocated in Chapter XIV, paragraphs 588 and 590. A large amount of ganja which leaves the Khandwa store is insufficiently taxed, and it is absolutely necessary that arrangements should be made both with British provinces and with Native States to ensure its being adequately taxed in future. Whether the duty should be levied at the place of production or at the place of consumption is a matter of detail: the main point is that it should be levied somewhere before it reaches the consumers.

Duty should be raised also on ganja consumed in the province.

650. The Commission cannot regard the possible falling off in retail license fees as any reason for refusing to raise the duty on the Khandwa ganja consumed in the province unless such a falling off produces other consequences detrimental to the Administration. Caution is always necessary in raising the duty lest it should lead to illicit practices, and the circumstances of the Central Provinces require special watchfulness in this respect. The difficulties in the way of increasing the duty owing to the much lower price of the drug beyond the borders of the province are brought out clearly in the Excise Commissioner's memorandum. But making all allowances for these difficulties and for the fact that the Khandwa ganja is inferior to that produced at Rajshahi, the Commission are of opinion that the rate might safely be raised.

The system of supplying ganja to retail vendors at a fixed price.

651. The question, however, is one which is intimately bound up with the whole system of monopoly existing in the Central Provinces, and this system demands close examination. It has arisen, as has been shown, from special circumstances. Its main features are

that Government interferes at the point where the ganja passes from the wholesale to the retail vendor to fix the price at Rs. 3 per sér, and that the monopoly of wholesale vend is given to a small and selected number of persons who tender for payment of duty at Rs. 2 per sér *plus* as much of the margin between Rs. 3 and Rs. 2 as can be got from them. There can be little doubt that, apart from the difficulties above referred to, the system itself may have operated against a rise in fixed duty. The interference in the natural operation of the laws of supply and demand has rendered it more difficult for the Government to gauge for itself the necessity for increasing the direct duty. And it may be remarked that, in spite of the fact that the direct duty has not been raised, the receipts from licensed fees have not very materially increased, and therefore, while Bengal has doubled its taxation on the ganja consumed, the Central Provinces taxation has remained stationary. The cause of this may partly be found in the different circumstances of the two provinces. Except in Orissa, the question of smuggling has been set at rest in Bengal. In the Central Provinces the arrangements with the Tributary States which were undertaken with this object have only just been completed, and it may have been considered advisable to postpone any increase in the duty until this should have been done. But even allowing for this, the Commission think there is reason for attributing to the different systems, at all events in part, the widely different results obtained.

Advantages claimed for the system.

652. The advantages claimed for the system are—

(*a*) that it enables the retail vendor to know what he is about, and makes him independent of combinations and caprice among the wholesale vendors. This would tend to induce him to bid more for his license:

(*b*) that it enables Government to secure part of the wholesale dealer's profits:

(*c*) that it tends to equalize the price to the consumer all over the province.

The first two of these are not in themselves of any great importance. The main object is to secure that the drug is adequately taxed; and if, as appears possible, the license fees instead of being raised are kept down by the present system, while obstacles are placed in the way of raising the fixed duty, the advantage is more than counterbalanced. And as regards the third, it may be observed that the check imposed upon the price of the drug by fixing the price to be paid for it by the retail dealer may very possibly keep the price to the consumer unduly low in some districts, while in others, where the opportunities for smuggling are greater, there is no adequate test of its suitability.

Disadvantages of the system.

653. The principal disadvantage of the system appears to be that it imposes upon the Government the responsibility of taking into consideration several factors the precise value of which it is difficult to estimate, and the effects of which are better gauged by the unimpeded competition arising from the auction of the privilege of retail sale. And it seems possible that the present system may operate to a certain extent in checking the cost of production and the profits of the cultivator. If these had free scope, they would probably tend to raise the price of the article. Moreover, the profits of the wholesale vendor as such are kept down to such a low figure that it is almost

certain that he recoups himself in many cases by taking out licenses for the retail vend. The system thus encourages a combination of interests which is not generally desirable. The subject is unfortunately not treated in the memorandum, but in Jubbulpore the Commission ascertained that out of 71 retail shops, 20 were held by the wholesale monopolist. The status of the latter is such as to give him practical command of the situation, and the inference is almost irresistible that he will make use of this power to acquire for himself some of the profits attaching to the retail business if dissatisfied with the profits of the wholesale business. Viewed in this light, the limitation of the price may be to a large extent inoperative.

654. Upon the whole it appears to the Commission that any attempt to regulate the price of ganja otherwise than by a combined system of fixed duty and auction vend of monopoly of retail sale in tracts differently circumstanced is a mistake. It amounts to an interference either too great or too little. A Government monopoly under which, through the agency of Government officers, the drug would be offered to the public at a maximum price would be a simple arrangement. This has been shown not to be the best system for ganja (Chapter XIV, paragraph 589). The alternative is to levy a duty which must be regulated according to experience, the maximum being determined by those general considerations which have been elsewhere explained, and leave the supply unhampered, except by such check as is afforded by the auction of monopoly of retail sale. The latter affords the necessary adjustment for disadvantages pertaining to different localities, such as unusual cost of carriage, facilities for smuggling, etc. If on account of such disadvantages the rate of duty needs to be reduced, there is nothing to prevent the adoption of special rates of duty for particular tracts.

Its abolition recommended.

In recommending an increase of duty, therefore, on Khandwa ganja, the Commission are prepared also to recommend that the rule under which ganja is supplied by wholesale to retail vendors at a fixed price should be abolished, and that wholesale vendors should not be required to pay fees for their licenses.

655. In one respect the Central Provinces system is more efficient than that of Bengal, *viz.*, the storage of the produce. No difficulty seems to have occurred in these provinces in bringing all the ganja to a central godown at Khandwa. This is probably because the establishment of the godown has obliged the cultivators to come to early terms with the wholesale dealers or their agents. Mr. Robertson, Deputy Commissioner of Nimar, says: "The agents buy up the ganja on their own account as a speculation frequently while the crop is standing. The whole outturn thus passes into the hands of about a dozen men, who are then able to run up the price at the Khandwa storehouse to all except the wholesale vendors, by whom they have been specially retained. The existence of the 'corner' in no way affects the vend of ganja, so far as this province is concerned. The wholesale vendors have to supply the retail vendors at Rs. 3 per sér, so that the latter, and through them the consumers, are not affected. But wholesale vendors from other provinces undoubtedly find it difficult to make purchases at Khandwa." The Commission think that a system which leads to the speedy disposal of the crop by the cultivators to the wholesale vendors is desirable, but the monopoly of wholesale vend seems to be in this province in too few hands, whereby combination against a rise of

Storage of ganja and increase in number of wholesale vendors.

duty is facilitated. Subject to the adoption of the measures advocated in paragraph 654, the Commission recommend that wholesale licenses should be more freely granted without charge as in other parts of India, the selection being carefully made by local officers according to requirement.

Assimilation of the Bengal and Central Provinces systems.

656. If the suggestions made in paragraphs 643, 649, 650, 654, and 655 of this chapter are accepted, the systems of Bengal and the Central Provinces will be practically assimilated. And apart from the fact that the system advocated appears to possess the greatest advantages, this result is in itself most desirable.

North-Western Provinces.

657. The statistics for the North-Western Provinces are regarded by the Excise Commissioner as very defective so far as regards the amount of imports and exports. In the absence of any fixed duty, and with a revenue determined solely by the license fees, no provincial record of the traffic has been kept up. Mr. Stoker is not confident that allowance has been made for transfers from district to district, and he thinks there is much risk that the same drugs may have been counted twice, and the provincial total thus exaggerated. Moreover, licenses for the sale of the different kinds of drugs have not been sold separately. All that can be gathered from the statements furnished is that the total amount of the license fees has increased by about 75 per cent. in the last 20 years and the number of retail licenses by 50 per cent., and that the imports and consumption of ganja seem to be on the increase. The excise ganja of Bengal is being displaced by the drug from the Central Provinces and Native States, which is almost wholly untaxed, and this is one of the weak points in the North-Western Provinces administration as pointed out in Chapter XV, paragraph 609. The total revenue from license fees is in 1892-93 Rs. 7,04,788, but from this would have to be deducted the amount due to licenses for the sale of charas and bhang which cannot be ascertained. At a rough guess, it may be put at one-third, leaving Rs. 4,70,000 due to ganja. To this must be added the duty on Bengal ganja levied in Bengal (about Rs. 1,12,600) and the registration fees at Re. 1 per maund levied on Central Provinces ganja at Khandwa, making a total of about Rs. 6,00,000, or Rs. 3-2-3 per sér on all imported ganja reckoned on an average of 4,774 maunds. On the whole this does not appear to be a very inadequate incidence of taxation, but it must be remembered that there is no control of production in the province, and that the taxation on the different kinds of ganja imported is very unequal. The number of shops is very large, nearly double in proportion to population of that which is found in Bengal. There can be no doubt that in this province more control is necessary, and some measures are urgently required for reducing the taxation of the different kinds of ganja which are brought into the province to some kind of uniformity. The need of remodelling the system has been fully recognised by the officers in charge of the excise; and the proposals of the Excise Commissioner, which have the support of the Member of the Board of Revenue in charge of Excise, include the following measures:—

(1) Prohibition of cultivation except under license.

(2) Prohibition of manufacture of ganja.

(3) Establishment of bonded warehouses, with control of storage and issue of ganja.

It is also proposed to control the import of ganja, and to impose an import duty at first of Rs. 50 to Rs. 80 per maund on *pathar* ganja from the Central Provinces and Native States, to be increased by degrees. For this purpose an amendment in the law will be required. Subject to the remarks which will be found further on (paragraph 679), the Commission agree in these proposals.

Madras and Bombay.

658. In Madras and Bombay the general opinion among local officers appears to prevail that no changes are necessary, though the Commission have reason to believe that these Governments recognise the impossibility of continuing the present state of affairs in view of general considerations affecting the whole of India. A seizure of 14 maunds 24 sérs of Madras ganja imported by sea to Calcutta was made in January 1894. When the Madras Collector of Customs was communicated with and asked to enquire full particulars and take action if he considered it necessary, he replied to the Calcutta authorities asking under what law he was desired to interfere. The Madras Act contains full provisions regarding the import and export of drugs; but these provisions have not been extended to the province. In view of the illicit imports into Burma from Madras, regarding which there is ample evidence from the former province, of the complaints from Mysore which are mentioned in Chapter XVII, and of the cheapness of the drug, there can be no doubt that reforms are urgently required. The system in Bombay is somewhat more formulated, but in view of the large amount of ganja produced, and the still lower price of the drug in the producing districts, there is no less need of an improvement in the system of administration. The annexed table gives a comparative view of the cultivation and taxation of ganja in these provinces, and in Bengal and the Central Provinces. The only comparison which can be made is that of total taxation per acre of reported cultivation, because the areas of cultivation and totals of taxation are the only figures on which any reliance can be placed in these two presidencies :—

1	2	3	4	5	6	7	8	9
Province.	Average area under cultivation in acres (10 years).	Whether cultivation is restricted or not.	Average Taxation for ten years.			Average revenue per acre of cultivation.	Average retail price per sér.	Remarks.
			By fixed duty.	By license fees.	Total.			
			Rs.	Rs.	Rs.	Rs.	Rs. A. P.	
Bengal	740	Yes	13,75,837	10,85,292	24,61,129	3,326	20 0 0	
Central Provinces ...	900	Yes	74,549	1,22,266	1,96,815	219	5 0 0 to 10 0 0	
Madras	350*	No	*Nil*	47,292†	47,292†	135	1 10 8	* 1893-94 probably underestimated. † 1892-93 only.
Bombay ...	1,152‡	No	Not given	Not given	1,22,987‡	107	0 6 0 to 5 0 0	‡ 8 years only.

Compared with Bengal and the Central Provinces.

659. The Bengal figure in columns 4, 5 and 6 represents nearly the whole of the revenue levied on all the ganja produced on the area given in column 2, as the Assam and Kuch Behar duties, which are not levied in Bengal, have been added.

The only item which cannot be added is that portion of the North-Western Provinces license fees which is due to the sale in those provinces of Bengal ganja. If this is calculated according to the proportionate amount of such ganja, it would not materially affect the calculation. If a similar calculation is made to determine the amount of the license fees due to the sale of Khandwa ganja in the North-Western Provinces, about Rs. 1,57,000 would have to be added to columns 5 and 6 of the Central Provinces figures, and the result of this will be to raise the average revenue per acre of cultivation in column 7 from Rs. 219 to Rs. 393. Some of the Khandwa ganja also finds its way into Bombay and Berar and other tracts, and pays duty there in the form of license fees; so the average per acre of Rs. 393 is still under the mark, but in any case the taxation thus calculated is very much less than in Bengal.

On the other hand, the average revenue per acre for Madras and Bombay is probably over the mark, as the amounts in column 6 represent the license fees paid for all the hemp drugs and not ganja only; and in the sales effected under these licenses is included a certain amount of ganja, at all events in Bombay, imported from other provinces. Against this, however, must be set the fact that both the presidencies export ganja,—in Madras to the extent of about one-seventh of the total produce, and in Bombay to the extent of more than one-half. But as the bulk of these exports goes to Native States, or is exported by sea, no revenue is realized therefrom, and the figures of column 7 are therefore on the whole probably in excess of the true figures. The general conclusion is that as compared with Bengal, or even with the Central Provinces, the taxation of the ganja produced in Madras and Bombay is very light.

History of the subject in Madras.

660. In the Madras Presidency various proposals have been made from time to time for introducing some control into the excise administration in respect of hemp drugs. In 1886 a circular was issued to all Collectors by the Commissioner of Salt and Abkari calling for information as to the extent and nature of the trade in these drugs. In this circular it was suggested that for the present it would probably suffice (*a*) to forbid cultivation except under license, which would be granted free of payment; (*b*) to prohibit manufacture except under license; (*c*) to sell the monopoly of manufacture and vend by districts or taluks as might appear best, licenses for manufacture and retail vend being granted at the Collector's discretion in such number as might appear requisite as in the case of the opium farms. Most of the officers consulted recommended the adoption of these proposals. The Board of Revenue, although they considered that the information collected showed that the consumption of intoxicating drugs was very limited, remarked that it was clearly the intention of the legislature that cultivation should be licensed, and they made the following proposals to Government:—

(*a*) to prohibit cultivation except under license to be granted free;

(*b*) to restrict possession by persons other than licensed wholesale and retail vendors;

(*c*) to grant free licenses to wholesale dealers;

(*d*) to put up to auction licenses for retail sale; and

(*e*) to impose a pass duty.

In view, however, of the indefinite and uncertain information obtained regarding the extent of the traffic in the drug and the limited nature of the consumption, the Madras Government came to the conclusion that in most parts of the Presidency no restriction was called for, but remarked that it was prepared to extend the provisions of the Abkari Act relating to intoxicating drugs to limited areas on adequate cause being shown.

Experience, however, showed that the demand for the drugs was considerably larger than was suspected, and that the competition in certain districts for the privilege of vend was very keen. Accordingly the licenses for retail vend were sold by auction, with the result that the revenue from this source rose the first year from Rs. 8,805 to Rs. 54,989. No further measures for controlling cultivation or restricting consumption were taken. The Board again considered the question of limiting the legal possession of the drug, which had been advocated by the majority of the Collectors, but came to the decision that restrictions on the cultivation of the plant should precede those on possession, and their objections to revising the idea of licensing cultivation appear to have been (*a*) that this would involve the taking out of a license by every person who had a plant or two in his garden; and (*b*) that it would have been necessary to make a large increase in the number of shops in order to meet the legitimate demands of consumers. It is not clear why the Board changed their views regarding prohibition of cultivation which they had previously recommended. And the number of shops existing in Madras is under the existing arrangement manifestly inadequate, being one for every 144,781 of the inhabitants. Considering that the consumption of the drugs in Madras is found to be much larger than was suspected, and that the propriety of introducing more control into the administration has for several years been recognized, the Commission are of opinion that the needed reforms should be no longer delayed.

Treatment of the subject in Bombay.

661. The system in Bombay, which was introduced in 1880, does not seem to have been brought under discussion since that time. The Commissioner of Excise states that the subject attracted little attention till the Commission was appointed. The Commissioner of the Northern Division says that the system seems to have grown up in a haphazard way. The subject has been treated mainly from the revenue point of view, and the control exercised has not been strict. At the same time the area of regular ganja cultivation in Bombay seems to be considerably larger than in any other province; and if measures with a view to restriction in consumption are necessary anywhere, they certainly appear to be so in this Presidency.

Control of cultivation for ganja.

662. The Commission on a full review of the whole circumstances connected with the ganja administration have framed the opinion that cultivation of the hemp plant for the production of narcotics in Madras and Bombay should be prohibited except under license, and that the licensed cultivators should be restricted to a limited area as in Bengal and the Central Provinces. They are of opinion that no greater difficulties exist in this respect than have been already overcome in these provinces. A few remarks are offered in justification of this view.

663. *First.*—In Madras and Bombay, as was formerly the case in Bengal and the Central Provinces, the regular cultivation is already confined to limited areas. There is practically scarcely any regular field cultivation of ganja except in the Kistna and North Arcot districts of Madras and the Ahmednagar and Satara districts of Bombay; and the prohibition of cultivation in other districts will involve no serious difficulty. And though the ultimate inclusion of all the ganja cultivation in an area more circumscribed than that of two whole districts is desirable and probably feasible, still the limitation even thus far would be a considerable step in the right direction.

Restriction of area of cultivation.

664. *Secondly.*—If it be objected that the prohibition of occasional cultivation of a few plants in the private gardens or enclosures of individuals will be difficult to enforce, to this the Commission would reply—

Objection as regards private cultivation.

(1) This difficulty has been overcome in Bengal, Assam, and the Central Provinces, in parts of which, as abundantly established by the evidence taken by the Commission, this sporadic cultivation was equally prevalent.

(2) The difficulty is not so great as it seems; for whereas at first sight it seems that it would be necessary in order to enforce the prohibition to increase establishments and exercise vexatious interference with the people, such has not been found from experience gained in other provinces to be actually the case. The difficulty of concealing the plant and the evidence of illegality involved in the mere existence of a prohibited plant in occupied lands, coupled with a legal prohibition, has in fact sufficed almost to exterminate such growth in tracts where ganja is produced with a minimum of prosecutions and penalties.

665. *Thirdly.*—If it be objected that the wild hemp plant growing in unoccupied lands is so plentiful that, even if the prohibition against cultivation is successful, ample opportunity will still be found to bring a large amount of ganja into the market from this source, to this the Commission reply—

Objection as regards wild growth in Madras and Bombay.

(1) That the ganja derived from such spontaneous growth, untended and unimproved, is so inferior as to obviate all likelihood of its competing with the cultivated ganja.

(2) That wild hemp in the strict sense is not found in tracts removed from human habitations, past or present; and the amount of ganja capable of being smoked which can be procured from such growth will not interfere with the success of the proposal.

666. *Fourthly.*—If it be objected that the ganja produced in Native States adjoining the Madras and Bombay Presidencies cannot be kept out of the province, and that this fact alone vitiates the scheme, to this the Commission reply—

Objection as regards Native States.

(1) That even if this be so, the same may be said of the provinces where cultivation is controlled; and while the arrangements of these

provinces are, no doubt, affected by the proximity of Native States, they are nevertheless sufficiently successful for practical purposes.

(2) That there is nothing to prevent the Government from entering into negotiations with the States (as has been done in the case of the Central Provinces, apparently with marked success) for mutual co-operation in the interests of the excise revenue, and the Commission (*vide* Chapter XVII) are prepared to recommend that this should be done.

667. It will be desirable to analyse the evidence on this point in both presidencies. Several witnesses in Madras speak of the needlessness of controlling cultivation, but on this point it cannot be expected that they should take a sufficiently wide view, as the interests at stake are larger than those of individual districts. The only witnesses who consider the measure impossible are—Mr. Sewell, Collector; Mr. Mounsey, Collector; Mr. Willock, Collector (as regards the Agency tracts); and Mr. Taylor, Manager, Jeypore Estate (as regards the Agency tracts); two Deputy Collectors; and a Missionary.

Evidence relating to control of cultivation in Madras.

On the other hand, there is a much larger consensus of opinion that control is feasible. The Hon'ble Mr. Crole, Member of the Board of Revenue, in charge of Excise, says: "If you were to order the stoppage of cultivation of hemp or even rice, it would be done. There would be no difficulty in having the order carried out. The people would stop the cultivation: they are quite amenable. It would be stopped without the necessity of espionage and interference, but there would always be the risk of false charges." Mr. Merriman, Deputy Commissioner of Salt and Abkari, says: "There is a good deal of backyard cultivation which is untaxed. It would be desirable to stop the sporadic cultivation if feasible. I think we could do this. I think it would be far simpler to issue an order stopping cultivation, and that would be far easier than attempting to tax it. I believe this cultivation could be stamped out by the mere issue of the order; and, supposing that there were reasonable facilities for consumers obtaining the drugs, the dissatisfaction would not be great." Mr. Benson, Deputy Director of Agriculture, says that "prohibition of cultivation would not harass the people, as those affected would be so few; and it would, I think, within a short time accomplish its object." Mr. Levy, Acting Deputy Commissioner, Salt and Abkari, thinks "the cultivation of the hemp plant, and the manufacture and possession of the drugs therefrom, should be brought under thorough control." Mr. Bradley, Collector, thinks that, except in the Wynaad, prohibition of cultivation would be possible in Malabar, and could "be generally carried out without much interference with the people, but would be hardly possible in the jungly parts." He thinks that for ordinary tracts the present abkari staff might be sufficient to secure compliance with the order, though he does not guarantee this.

Other advocates for the control of cultivation are—Five Deputy Collectors, one of whom, Mr. Azizuddeen Sahib Bati, in North Arcot, says that a prohibitive order would have the effect of stopping cultivation without any great interference; two Deputy Conservators of Forests, three Tahsildars or Acting Tahsildars,

the Hon'ble Rai Bahadur Sabapathy Mudeliar, Raja K. C. Manavedan, three pleaders, five missionaries, and four others, *viz.*, a municipal chairman, a zamindari manager, a cashier, and a sarishtadar.

Bombay.

668. In Bombay, though several witnesses say that further control is unnecessary, three of whom are under the impression that licenses are already required for cultivation, there is no opinion adverse to its restriction on other grounds. The following officers see no serious objection to restriction of cultivation :—Mr. Vidal, Chief Secretary to Government; Mr. Reid, Commissioner; Mr. Campbell, C.I.E.; Collector; and Mr. Ebden, Collector of Ahmednagar.

Mr. Monteath, Collector, though he thinks there is no need for controlling cultivation, is of opinion that the time has come for putting the drugs on the same footing as alcohol and opium. Three Deputy Collectors are in favour of control; also two mamlatdars, an inamdar, a forest officer, and a drug farmer.

From this analysis of the evidence it seems clear that no great difficulty need be anticipated in bringing the cultivation of ganja generally under control. There are tracts, no doubt, where measures would have to be taken by degrees and with caution; but the inclusion of these at the outset in a system of control is not essential.

Supervision of the manufacture and storage of the crop required with a view to imposition of duty.

669. The Commission are further of opinion that control and limitation of cultivation must be accompanied with such supervision of the manufacture and storage of the crop as is necessary to the imposition of a fixed duty on ganja in addition to the fees for licensed vend which are at present levied. In regard to both these matters, the experience of Bengal and the Central Provinces is available, though the systems differ at present as to storage.

Levy of duty in Madras and Bombay.

670. That there is room for the imposition of a duty on ganja in both presidencies can hardly be doubted. In Madras, though there are several officers of standing who are satisfied with the present arrangement, there is no protest against increasing the duty, while a few witnesses are in favour of increasing the price of the drugs. Mr. Willock, Collector, says: "I am not opposed to an increase of the price of the drug where practicable." Mr. Bradley, Collector, says: "At present I do not think hemp drugs are sufficiently taxed with reference to alcohol." Other advocates of increased taxation are: a District Surgeon, a District Forest Officer, a Deputy Tahsildar, two medical practitioners, a jagirdar, a pleader, a merchant, a newspaper editor, bank cashier, and three missionaries. In Bombay there is also a good deal of evidence as to the needlessness of further interference on taxation; but there is at the same time weighty evidence in favour of increased taxation. Mr. Mackenzie says: "I think the taxation of the hemp drugs in this Presidency might be raised; but the question would require details and careful examination. The ganja of this Presidency is roughly manufactured, though the cultivation is careful enough. A direct tax would necessitate the adoption of a system of distinct wholesale vend. I see no objections to that, as the tax does not fall on the cultivator. The variations in the retail price shown in paragraph 8 of my memorandum are, no doubt, excessive, and seem to

indicate that there is room for taxation to regulate the wholesale rates of the drug." Mr. Vidal says: "In view of the higher taxation in other provinces, I see no reason why there should not be a higher direct tax in this province. The disproportion between the taxation of liquor and of hemp drugs, and the relative dearness of liquor which results from this, also points to the propriety of increasing taxation on hemp drugs." Mr. Monteath, Collector, says: "I think the present system of excise administration in respect of hemp drugs has worked fairly well, but that the time has come for putting these drugs on the same footing as alcoholic stimulants and opium. Hitherto the consumption of preparations of hemp has not been extensive, and so long as it was very small, the farm of the right to sell, as dispensing with the need of any preventive establishment, was perhaps more suitable. But it seems that not only in this district (Bijapur), but throughout the Presidency, the amounts bid for the right to sell have been increasing, and it may fairly be inferred that the habit of consuming these drugs is spreading. It cannot, indeed, be said yet to be prevalent; still the total consumption is, I think, sufficient to make it worth while to impose an excise duty; it is already in this district much in excess of the consumption of opium, though insignificant as compared with the consumption of alcoholic stimulants, particularly toddy. It is, I believe, generally admitted that the system of deriving a revenue by farming the right to sell is suitable only in the earliest stage, and that the levy of an excise duty is the fairest and most satisfactory method of taxing an article produced in the country. Now the levy of an excise duty on preparations of hemp will present no difficulties in this Presidency. The existing abkari establishments would probably suffice for the levy of the duty, or at least would require strengthening to but a small extent. The levy of an excise duty would not, I think, excite any opposition. An alteration in the form of duty could not reasonably be objected to." Mr. Ebden, Collector, says: "The hemp drugs are very much cheaper than liquor now. For a pice a man can get enough ganja to last him for a week if he is a moderate consumer. There is, therefore, considerable margin for heavier taxation of the drug without driving the people to liquor or other intoxicants. I consider there is a considerable margin for taxation, though the drug is consumed by the very poor. I have no sympathy with the excessive consumer, and the moderate consumer would not feel a moderate increase." Mr. Sinclair, Collector, says: "I consider there is a margin for increasing taxation, having regard to the price of other intoxicants, the fact that the drugs are mainly used by the poor, and the danger of smuggling." Mr. Almon, Assistant Collector, Bombay, says: "My impression is that the tax on the drugs is too low. I think that the ordinary liquor consumer pays twice as much for what he wants as the ordinary ganja consumer would, or three times as much as the ordinary bhang drinker. I think the rates should be equalized." Other advocates of increased taxation are three Deputy Collectors, the Administrator of the Jath State, an Assistant to the Commissioner, an inamdar, a mamlatdar, a pleader, and a drug farmer.

671. In view of these opinions, as well as of the general considerations which have been explained above, the Commission have no hesitation in advocating the gradual assimilation of the Madras and Bombay systems to that in force in Bengal. The process of arriving at adequate taxation must necessarily be gradual, but a commencement should be made without any further delay.

Recommendations regarding taxation of ganja in Madras and Bombay.

The present is the time for this measure, while consumption of ganja is still believed by the authorities to be very limited. It cannot but be the case that the enormous difference between the taxation of liquor and ganja is an incentive to the increase in the drug habit, and such an inconsistency between the arrangements of different provinces and the administration of the excise on different kinds of intoxicants cannot, in their opinion, be any longer maintained.

Berar.

672. In Berar the foundation has already been laid for the introduction of a system of control in respect of ganja similar to that advocated by the Commission. Cultivation is already restricted and an acreage duty imposed on its growth. The Commission are not aware of the conditions under which this has been found possible. The law of the province stands on a special footing, as previously explained. The Commission believe that there will be no difficulty, and there certainly will be some advantage in assimilating the system to that which exists in the Central Provinces, and which may ultimately be adopted in Bombay. Ganja is inadequately taxed, and it is unlikely that the pitch of taxation necessary to restrict the consumption can be reached otherwise than by a direct duty, or that a much heavier acreage duty will effect the desired object.

Ajmere, Coorg, and Quetta-Peshin.

673. Not much need be said of the other minor administrations. Progress in Ajmere must depend upon co-operation with the British system in surrounding States. Ultimately it is probable that the system can be assimilated to that in force in the rest of British India. In Coorg the price of ganja is very low owing to the facility of obtaining a supply from the Madras Presidency. When the system of the latter is revised, care should be taken that similar restrictions in Coorg are not wanting. Quetta-Peshin hardly requires special notice. The consumption of ganja must be very small, if it exists at all, as the sources of supply are very distant. The retail price stated to prevail is higher than anywhere else in India except Bengal and Assam.

Taxation of charas.

674. As the only province which receives large imports of charas, the Punjab is primarily concerned with the administration of this drug. Hitherto there has been no taxation of charas in the Punjab beyond the levy of license fees for its vend. It is not used in Assam, Madras, Berar, and Coorg, and but little in Bengal, the Central Provinces, and Bombay. It is used in the Punjab, the North-Western Provinces, Sind, and Quetta-Peshin. Bengal levies a duty of Rs. 8 per sér on the small amount imported, and the Central Provinces Rs. 10 per maund. In Bengal, Mr. Gupta says that it will be necessary ere long to raise the duty. The import duty in Bombay is 8 annas per maund. In the other provinces the only tax is, as in the Punjab, that which is represented by the license fees for vend. Bengal is, therefore, the only province where the taxation is adequate. In the North-Western Provinces it is proposed to levy a duty of Rs. 80 to Rs. 100 per maund on all charas imported. In the Punjab, in pursuance of the provisions of Act X of 1893, a duty of Rs. 20 per maund has been proposed. This appears very small. The conditions under which the trade in charas from Yarkand is carried on operate to some extent against more severe taxation. But if provision is made to prevent the tax from being demanded from the actual importers, the Commission are of opinion that there is ample room for taxation without the trade

being seriously affected. There is a large amount of responsible evidence for taxing the drug in the Punjab and the North-Western Provinces, where the consumption is far greater than elsewhere, and the Commission think that Rs. 80 per maund is not too high to begin with. Ultimately, regard being had to the consideration above noted, the taxation might be raised considerably.

Transport of charas and inter-provincial arrangements.

675. As the supply of charas is so completely within the control of Government, it is not necessary to say much regarding its disposal. The establishment of bonded warehouses, to which the drug can be taken on arrival, and from which it shall be issued only on payment of duty by the licensed vendors, has already been decided upon in the Punjab. This measure will relieve the importers from having to pay the tax in anticipation of sales, and consignments from these warehouses will be sent under pass to the different centres of consumption. The Commission do not think it necessary that the whole duty leviable under provincial arrangement should be demanded when these consignments are removed. The bonded warehouse system may be again resorted to by Local Governments which desire to impose further taxation locally. But as from time to time the Punjab Government will, no doubt, find it possible, with reference to political considerations, to enhance the duty, it will be desirable that there should from the first be an understanding as to the relative claims of the importing province and the consuming province to the duty realized. A similar question has arisen regarding the Rajshahi ganja exported to other provinces, and the procedure has not been uniform. This is one of the cases in which the intervention of the Supreme Government is needed for the settlement of inter-provincial arrangements and of arrangements between British provinces and Native States. It may be necessary to amend the Act in order to carry out the above suggestions. For although section 23-A of the Act provides for the imposition of duty on the imported drug without specifying where it should be paid, section 36 (*d*) lays down that the bringing of it into British India without payment of the prescribed duty is an offence. The matter is under the consideration of the Local Government. It is essential that arrangements should be made for taxing charas not at the frontier, but at the bonded warehouses.

Control of bhang.

676. The difficulty of controlling bhang in Bengal, Assam, the North-Western Provinces, and the Punjab arises from the fact that there is large spontaneous growth in the mountainous and submontane tracts of these provinces. There is undoubtedly a belt of growth which precludes strict control. But in parts of these provinces away from the hills there is little or no spontaneous growth, and in these parts as well as in the other provinces control is possible. There is a little cultivation in the Punjab and the North-Western Provinces, and considerably more in proportion in Sind. None of this cultivation is in the Himalayan region, where the wild growth exists. With the exception of Bengal and the Central Provinces, the only taxation is that realised by auction vend of the monopoly of sale. In Bengal a duty of 8 annas a sér is levied on all bhang brought to the storehouses under Government supervision, which represents but a small fraction of what is illicitly consumed. Without controlling the spontaneous growth of the plant, it has been found impossible to raise the duty, though the subject was fully considered in 1889-90. In the Central Provinces a duty of Rs. 2 per sér is levied on foreign

bhang, which operates to prevent the imports from passing a very limited figure. The taxation of this bhang is excessive, and its sale is affected by the fact that only the wholesale dealers are allowed to sell it by retail.

Recommendations for its control and taxation.

677. The Commission are in favour of taking such measures as are possible for controlling and taxing bhang. For the present they consider that in the belt of growth above referred to nothing more can be done than to auction the monopoly of retail vend. In other parts they are of opinion that cultivation should be prohibited, except under licenses, and arrangements made for the transfer of the whole crop produced from licensed cultivation to the authorised vendors. In these tracts they are of opinion that some attempt may be made to extirpate the spontaneous growth by rendering the occupiers of land responsible that it shall not be found on their lands. Legislation may be necessary for the purpose. They would like to see Mr. Westmacott's circular which was cancelled by the Bengal Government revived, and they would suggest a modification of the Assam circular permitting the use of green or dry hemp for the use of cattle. Now that the habitat of the spontaneous growth has been clearly defined, Local Governments will have no difficulty in deciding where, for the present at least, the existing system must be allowed to continue. The Commission think that it may be impossible to treat the bhang which is produced in ganja-growing tracts in a different manner from ganja. To do so would probably be to imperil the ganja administration. But if this opinion is found to be mistaken, they would be glad to see this bhang more leniently treated than ganja. The Commission find that in the Central Provinces bhang is only permitted to be sold by the wholesale vendors, and the duty is the same as in the case of ganja. The reason for this is not apparent. As judged by the standard of other provinces, the incidence of taxation is high compared to ganja.

Distribution of the hemp drugs to retail vendors.

678. As regards the distribution of the drugs to retail vendors, the Commission think that when adequate arrangements have been made for their taxation, not much interference is required. The evidence contains various suggestions on this subject. Some witnesses point to the large profits reaped by wholesale vendors, and suggest that these middlemen should be abolished, and that the functions discharged by them should be assumed by the Government in order that these profits may be secured for the public revenues. The Commission are not in favour of this proposal. It is open to some of the objections against a Government monopoly which have been previously stated. If the profits reaped by the wholesale vendors are found to be excessive, this fact would point to a rise in the duty. If the latter is sufficient, the Government need not concern itself with the dealers' profits. Private enterprise is, moreover, better suited for the distribution of the taxed drugs than Government agency. The aim of Government should be to dissociate itself, as far as possible, consistently with efficient control and adequate taxation from the supply of the drugs. This general policy may admit of special exceptions. The Bengal Government has made provision for such exceptions, while affirming the general principle, in the following rule* :—" Except in districts where minimum prices have been prescribed by the Board, no attempt should be made to regulate the price at which spirits, liquor,

* Bengal Excise Manual, page 105, Rule 14.

or drugs are supplied by the producer or wholesale dealer to the retail vendor, or by the retail vendor to the consumer." In the Central Provinces the price at which the wholesale vendor is to supply the drugs to the retail vendor has been fixed for all districts, and the subject has been already considered. This is not done elsewhere in British territory, and any deviation from the above-stated principle seems to the Commission to require special justification. The privilege of wholesale vend should not be too restricted. This will result in great variations of the prices paid by consumers owing to the absence of competition. In Assam the "effect of farming the monopoly of a whole district to a single person has been found to result in very high prices even where smuggling is known to exist," and this should be obviated if possible by freer competition in regard to the supply. If this fails, special arrangements may be required for keeping the price at a reasonable figure.

Import, export, and transport duties.

679. In some provinces import, export, and transport duties are levied; and this practice is not uncommon in Native States. This practice arises from the want of uniformity which exists in the systems of administration. It is attended with considerable difficulties, and serves no useful purpose in itself. If all the drugs were adequately taxed at the sources of supply, subject to such additional taxation as local circumstances demand, the amount of which is best determined by auctioning the licenses for vend, there would be no need for such duties at all. As a supplementary means of taxation, where these requirements are not fulfilled, it may be necessary in special cases to maintain them. This must be the case, at all events for some time to come, if drugs are imported from Native States into British territory. But, if possible, such imports should be entirely prohibited, unless the State concerned has assimilated its system to that in force in British territory. Transport duties from one place to another in British territory should be entirely abolished as soon as adequate taxation of the drugs at the source of supply has been provided for. A system of free passes to licensed persons is all that is needed. Partial measures of this kind tend to obscure the real issue, *viz.*, how far consumption needs to be checked by a rise in duty.

Retail vend.

(a) Separation of licenses for different kinds of drugs.

680. The system of retail vend differs largely in the different provinces. In some places the licenses for retail vend of the drugs are held by the same persons and under the same contract as licenses for the sale of opium without any attempt to discriminate the amount of fees due to each. More frequently the licenses cover the sale of all kinds of hemp drugs, and the relative demand for the different kinds is not ascertainable. Where the demand is small there may be reasons for maintaining the latter system, but the hemp drug licenses should, in the opinion of the Commission, be distinct from all others, and in most cases it is desirable that the licenses for the different kinds of hemp drugs should also be distinct; for it is not the desire of Government that a demand for any of the drugs should be created. Shop licenses should only be given where the demand exists, and there may be a demand for one kind and not for another. The demand for a bhang license, for instance, should not be responded to by licensing the sale of ganja or charas in addition, which may not be necessary. As a rule the licenses should be sold separately. As Mr. Stoker says: "This would enable us to provide for the sale of the more harmless

forms of the drugs without the others, and to meet the demand for one form without allowing the sale of the other forms of the drug."

(b) Separate sale of shops.

681. As to the question whether the licenses for different shops should be sold separately or collectively for any given tract, the Commission are not prepared to generalize. The latter system affords a better guarantee for the respectability of the licensee, and has the merit of simplicity. But where auction bids are affected by combinations, the separate system may be desirable. The matter is one that must be left to the discretion of Local Governments and Administrations.

(c) Grant of retail licenses to wholesale vendors.

682. The Commission are averse, as a rule, to the grant of retail licenses to wholesale vendors, and there is a good deal of evidence against the practice. It is not desirable to insist on the wholesale vendors becoming also the retail vendors, and diversity of practice tends to produce complications. If both functions reside in the same person, he has too extensive a monopoly, and will command the market to an undesirable extent. It cannot be too strongly insisted upon that uniformity and simplicity of system are essential to providing the means for ascertaining whether the drugs are sufficiently taxed; and when some of the shops are held by the wholesale vendors, and others by separate retail vendors, it is more difficult to gauge accurately the effect of the system. At the same time the Commission are aware that the practice of allowing wholesale vendors to hold retail licenses is very general, and they are unable to recommend that it should be authoritatively put a stop to. The subject is one which they would commend to the notice of Local Governments with reference to the above remarks.

(d) Licensing of shops.

683. A separate license should be granted for each shop. This is ordinarily the practice, but there are exceptions. None should be permitted. The District Officer should watch the auction bids and refuse to renew licenses if they only amount to a nominal figure. The principle should be to supply a real demand, not to create one; and if the demand only exists to a very limited extent, the danger of stimulating it must prevail against the convenience of the very limited number of consumers. The number of the population per retail license in the different provinces in 1892-93 was as follows:—

	Souls.
Bengal	23,560
Assam	19,975
North-Western Provinces	12,012
Punjab	12,869
Central Provinces	9,109
Madras	144,781
Bombay	43,528
Sind	4,478
Berar	6,061
Ajmere	30,130
Coorg	28,842

The number of shops in Madras is only 246, and the allegation of some of the witnesses that there is no need for shops because the consumers of ganja can get ganja when they require it from the cultivators receives confirmation from these statistics. In Bombay the number of shops is stated to be nearly double the number of retail licenses, and the difference is not explained. The number of souls per shop is only 24,681. No doubt density of population is an element in the consideration, and thinly populated tracts will require more shops proportionally than where population is dense; but the number of shops in the North-Western Provinces, Punjab, Central Provinces, Sind, and Berar seem to require attention with reference to these remarks. A considerable reduction of shops has been under consideration in the North-Western Provinces which was to come into force in 1893-94.

(*e*) Consumption on the premises.

684. The hemp drug shops in British India are rarely used as smoking resorts. They are not unfrequently shops where other articles are also sold. If not, they are generally small and incapable of affording accommodation for a number of persons. Ganja smokers who smoke in company generally congregate in places of public resort or in their own houses. And the evils which result from consumption of liquor on the licensed premises in England may be said to be unknown in connection with ganja shops. There are a few witnesses who in answer to the Commission's question on the subject say that such shops are undesirable; but these remarks are mainly founded on theoretical objections, not on practical experience. In the Central Provinces consumption on the premises has been prohibited since 1891, but there is no information as to the origin of the prohibition. It seems probable, however, that when the prohibition was issued as regards madak and chandu, the clause was made to include the hemp drugs without special inquiry. In the City of Bombay there are two classes of shops—those in which consumption on the premises is permitted, and those in which it is prohibited. With reference to the former, Mr. Campbell, Collector, says: "I think it is a good thing to have some shops in Bombay City where the drugs are consumed on the premises. It keeps the consumers under notice. The shops are bound to close at a certain hour and the consumers to behave in an orderly manner. This tends to regulate the practice and control the habits of consumers. The closing of the chandu and madak shops is said to have really increased the number from 14 shops to about 150 clubs. The latter are not open to inspection or visit by the authorities. As a matter of fact, too, consumption of ganja within licensed shops is really small and shows no serious evil." Places for sale and consumption of ganja are contemplated by the old Bengal Acts II of 1866 and IV of 1866 relating to Calcutta. The Excise law is generally silent on the subject. The Commission have no recommendation to make on the subject which may be left to the discretion of Local Governments. In the course of their inquiries in the North-Western Provinces, it came to the notice of the Commission that in Lucknow shops were kept by females (called Sakins) for the sale of hemp drugs. The witness who mentioned the fact described the "Sakins" as "worse than prostitutes." The practice was brought to the notice of the Local Government, and stringent orders prohibiting the grant of licenses to "Sakins" have been issued. It has been brought to the notice of the Commission that in Assam, where indulgence in liquor sometimes is so rife among the coolies that the garden work is entirely stopped, some planters have taken the shops themselves, and kept them

under control to prevent drunkenness. The plan is one which might be tried as regards ganja in cases where its use has any tendency to a similar result. In the Punjab and in Quetta-Pishin the licenses for retail vend have a provision binding the vendor not to sell the drugs to children or insane persons. The sale to children has been noticed by a few witnesses in other provinces, and the Commission recommend the adoption of a similar provision in all such licenses everywhere.

Local option; Law regarding—

685. The provision made in the law or rules of the Excise Department for consulting local public opinion in regard to the opening of shops is very limited. The Bengal Act contains a provision for assigning to any municipality with its consent the functions of the Local Government relating to the grant of licenses, and after such assignment no conditions or rules may be imposed by the Local Government without the consent of the Municipality. It is not clear whether any municipality in Bengal has been invested with these powers. But in every case of licensing shops in a municipality the Collector is ordered by rule to notify to the Municipal Commissioners the sites selected for shops within municipal limits; and should they object to any of them, he is instructed carefully to consider their objections, and, if he does not agree with them, refer the matter to the Commissioner of Excise for decision, pending which he must not allow any shop to be opened on a site objected to. In no other province is there any special provision of the law for ascertaining the wishes of the people in regard to the opening of shops for the sale of hemp drugs.

Evidence of revenue authorities regarding local option.

686. The subject of local option was put to the witnesses, who were asked whether the wishes of the people are consulted or considered in any way before a shop is opened in any locality, what measures are taken for this purpose, and whether local public opinion ought to be thus considered. The number of witnesses who have replied in the affirmative to the latter question is considerable—228 in all, of whom 31 are superior civil officers, 79 subordinate civil officers, and 104 non-officials. But very few of these witnesses express any opinion as to the method by which local opinion should be consulted. The existing practice is not to consult local opinion definitely. The opinions of local subordinate officers are received, but seldom those of the residents of the locality, though any objections which may be made are considered. With this procedure the highest authorities generally are satisfied. In Bengal, Mr. Lyall says: "No attempt at a plebiscite or anything of that kind is made. The number of shops has been greatly reduced of late years, as statistics will show. Further reduction would cause great discomfort to consumers, and I think they have a right to be considered. I am not prepared to say whether an appeal to public opinion would result in the closing of many more shops." Mr. Westmacott says: "I think it is rubbish consulting local public opinion. It generally means consulting a number of babus who are out of all sympathy with other classes, and utterly ignorant and careless of their requirements. By babus I mean those known in Bengal as the *bhadralok*, comprising pleaders and schoolmasters in great part. My remarks do not apply to zamindars, who would not come forward and give an opinion in the matter of local option, but I should undoubtedly go to them if anxious to find out what the local public opinion was. There would be no difficulty in getting public opinion in the villages, for it would be ascertained from the *pradhans* or principal raiyats; but in towns the division

between classes is such that there is no homogeneous public opinion, if I may use the phrase." Mr. Gupta says local "opinion is not formally consulted, but attention is paid to any reasonable objection raised against particular sites, though most of the sites being old ones, it is seldom that they are objected to. Moreover, shops for the sale of hemp drugs are not considered a nuisance, and are often accommodated in the same room where other business is carried on." In the North-Western Provinces, Mr. Cadell says: "I have never heard of any objections to drug shops. I have heard such objection regarding spirit shops. The wishes of the community should be consulted. Hitherto the objection to drug shops has always come from above, *viz.*, from the Board, the Commissioner, or the Collector." Mr. Stoker's evidence is to a similar effect. In the Punjab, Mr. Gordon Walker says: "There is nothing in the nature of 'local option.' In practice the shop sites remain as they have been established for a long time, and the necessity for a change in the way of adding new shops or closing existing ones seldom arises." It may, however, be noted that there is special provision in the Punjab for inviting the opinion of the residents of a locality regarding the opening of a new liquor shop and holding a local inquiry if necessary. Similarly in the Central Provinces, there is a modified system of local option as regards liquor shops, which are more than six times as numerous as ganja shops, but not in regard to the latter. Mr. Drake-Brockman says that the administration has all along shaped its policy on the assumption that the drug is extremely deleterious, and it is a standing order that no more should be licensed than are necessary to meet the demands of consumers, who, if a licit supply were not available, would probably supply themselves illicitly. Mr. Laurie says: "In an agricultural province like this, the people are not given to formulating their views in speech or writing; and 'public opinion' can only be arrived at by laborious research." In Madras "it has been directed that in cases of alterations in the number or sites of shops in municipalities, a list of the proposed shops with their sites should be forwarded to the Council in sufficient time to admit of its remarks being received and considered; and though in the rural tracts the location of shops is at the discretion of Revenue officers, representations from District or Taluk Boards or Taluk Unions would invariably be received with attention." In Bombay, Mr. Mackenzie says: "There is no fixed rule as to local option. In some districts it is attended to carefully; in others the Collector uses his discretion according to the information he possesses as to the demand; but in all any representation by the inhabitants for or against the establishment of a shop would have full consideration. Such representations, however, have seldom been made." The same is the case in Sind. Mr. James, the Commissioner, says: "No concession of local option in the matter of hemp drug shops has been made, nor is it necessary. Where there is sufficient demand, the farmer applies for a shop, and retailers are all grocers, and the drug forms an addition to their ordinary stock of groceries.....A farmer does not, like a publican at home, stimulate sales by accessories calculated to make his shops attractive. He simply depends on the demand. The Collector and District Magistrate, after consulting the local officials, is able to judge whether a shop should be opened or not, and local residents other than the consumers of the drug take no more interest in the matter than a tailor in an English country town in the question whether a particular grocer down the street should have a license to sell claret or not. The subordinate officials whom the Collector would consult before

deciding.....no doubt ask the local zamindars or Hindu mukhi their opinion upon this as upon most matters affecting the peace and comfort of the village. But the matter is too insignificant for any formal rule to be made or to be necessary."

Other evidence.

687. It is perhaps doubtful what might be the effect of an attempt to canvass public opinion more completely than is at present done. A missionary in Bengal and another in Assam think that local public opinion would close every ganja shop. But Mr. Cockburn, an officer of long standing in the Opium Department, North-Western Provinces, says: "If the wishes of the people were consulted, the number of liquor shops would be at once doubled, and ganja and bhang obtained at every bania's." Mr. Thorburn, Commissioner in the Punjab, takes the same view. A missionary in Madras, who is an advocate of prohibition, says: "I do not see the use of consulting local opinion on such a question. Though public opinion is decidedly against the use of hemp drugs, it is doubtful if the majority of the people would take the trouble to express any opinion on the subject, while consumers of the drug would certainly try to show that opinion was in favour of opening such shops." One witness in the Central Provinces sees serious objections to referring the question to public opinion on the ground that, "whenever public opinion is taken, it has led to many difficulties and mal-administration." There are three opinions, two in Bengal and one in Madras, for consulting district and local boards as well as municipalities regarding the opening and shutting of shops; and one witness in Bengal would ascertain local option through the panchayats which exist under the Chaukidari Act; but none of these witnesses seem to have much confidence in the plan they propose.

Commission's view of local option.

688. The Commission feel that except in municipalities where the responsibility of regulating the number of the shops might with advantage be shared by the District and Municipal authorities, there is not much need or opportunity for soliciting public opinion in regard to the matter; but that the leading rural notables, zamindars, or headmen should be consulted by the subordinate officer who reports the case when new shops are proposed, and that objections, if presented, should continue to receive the most careful attention. But the district officer must be wholly responsible for not allowing shops to exist where there is not a demand for them.

Maximum of possession.

689. The object of limiting the amount of the drug which may be legally possessed by any one person is to place a check upon smuggling and to restrict consumption. The imposition of this limit is specially required where the proximity of Native States affords facilities for the former; and recommendations for lowering the maximum are made by several witnesses in this connection. Consumption is also thereby checked, for not only is excess fostered by the possession of a large store, but means are afforded for more extensive distribution of the drug. The maximum of legal possession is very different in different parts of India. The limit as fixed by Act XXII of 1881, which is in force in the North-Western Provinces,

the Punjab, the Central Provinces, Ajmere, Coorg, and Quetta-Pishin, is as follows :—

Ganja or charas, or any preparation or admixture thereof	... 5 tolas.
Bhang, or any preparation or admixture thereof	... ¼ sér.

This amount is held to be reasonable by the Excise Commissioner, North-Western Provinces, and there are no opinions of any weight in favour of its alteration.

In Bengal the limit fixed by Bengal Act VII of 1878 is as follows :—

Ganja or bhang, or any preparation or admixture of the same	... ¼ sér.
Charas, or any preparation or admixture of the same	... 5 tolas.

There are several witnesses who recommend the reduction of the maximum for ganja to 5 tolas ; and, though the subject has not been noticed by any very high authority, the majority of these witnesses are men of special experience in excise matters. As regards ganja imported from the Orissa Tributary Mahals, the Bengal Government has authority under the Act to fix a lower maximum, and it has accordingly fixed 5 tolas.

In Madras the Act (I of 1886) provides that the Government may fix a limit. No such limit has been prescribed, and the Commission are of opinion that this should be done.

In Bombay and Sind the Act (V of 1878) prescribes the limit fixed by the Government for retail sale as the limit of possession. This limit has been fixed by notification for the whole Presidency at 40 tolas or half an Indian sér for all intoxicating drugs. There is a considerable amount of evidence in Bombay that this limit is too high. Mr. Mackenzie says that it might be very considerably reduced, and four Collectors, Messrs. Campbell, Monteath, Woodward, and Lely, recommend the adoption of 5 tolas as the limit for ganja. Eleven other witnesses in this province advocate reduction of the maximum. In Sind there are fewer opinions on the subject, but there also the reduction of the limit is recommended by three witnesses.

In Berar no limit of possession is prescribed ; the limit for retail sale is—ganja and bhang, 20 tolas ; charas, 5 tolas. Three witnesses recommend reduction of the limit, two of whom are excise officers.

The Commission's view.

690. As regards ganja and charas, and any preparation or admixture of the same, the Commission are of opinion that there should be one limit for the whole of India, and that this limit should be 5 tolas. It is only in Bengal that this measure would require an alteration of the law, and the opportunity should be taken when the Excise Act is amended to make the necessary provision. It is understood that the subject has already been under discussion, and that this amendment of the law has been recommended by the Excise Commissioner. As regards bhang, the limit is nowhere less than ¼ sér. This limit is probably low enough where the hemp plant grows wild, *viz.*, in the Bengal Presidency. For other provinces, where bhang is merely the refuse of the ganja plant, the question arises whether the limit ought

to be higher than in the case of ganja. But upon the whole the Commission think that the two products, ganja and bhang, are sufficiently distinct, and that no great objection exists to allowing a higher maximum. They would therefore recommend that 5 tolas for ganja or charas and 20 tolas or ¼ sér for bhang be regarded as the proper maxima for all provinces, and that as opportunity offers all Native States be advised to accept these limits. There is certainly some advantage, considering how British territory is interlaced with Native State territory, in having one standard in this respect for the whole of India.

Taxation of hemp drugs according to strength.

691. In the case of the excise of spirits, the duty is levied on the alcoholic content of the liquid as determined by the percentage of proof spirit present, and, in view of the varying amount of resin extraction present in different qualities of hemp drugs (on which the narcotic value depends), it might be argued that the equitable mode of levying duty would be by the adoption of a sliding scale, the duty varying with the percentage of resin extraction present. But there are at present practical difficulties against the adoption of such a system. The physiological value of the resin extraction present in all samples is not similar; and, though two specimens may contain precisely the same percentage of resin extraction, it does not follow that the narcotic power of the drugs would be equal, and also that the percentage of extraction in the drugs may vary from year to year. The Commission, therefore, make no recommendation regarding the taxation of hemp drugs according to their strength.

Burma.

History of prohibition.

692. The province of Burma stands on a different footing from that of any other province, inasmuch as the hemp drugs are entirely prohibited. This prohibition was put into force in the year 1873 and embodied in the Excise Act, 1881. The Chief Commissioner has power to grant special licenses for cultivation, sale, and possession of the drugs; but the power has not been used. The prohibition arose out of the inquiry made by the Government of India in 1871. Sir Ashley Eden, then Chief Commissioner, recorded the following remarks regarding ganja in his review of the Excise Report for 1870-71: "The sale of this article is prohibited at Ramree, Sandoway, Tavoy, and Mergui, and the Chief Commissioner considers that no further addition should be made to the number of places for the sale of this pernicious drug, which is smoked only by the natives of India. Indeed, he would be glad to have the opinion of the Commissioners as to the possibility of withdrawing all licenses for the sale of ganja throughout the province. Its use is at present happily little known to the people of the country; at the same time there is every reason to fear that a taste for it may be spread among them by the people of India as in the case of opium. It certainly seems to the Chief Commissioner that it is very desirable to at once sacrifice the small revenue derived from this source and stop the consumption absolutely before the evil comes upon the country. The only sufferers from the cessation of the supply will be a few of the Indian labourers who come to work here during the rice season. They must learn to take the want of ganja as one of the discomforts of a sojourn in a foreign land, for which they are amply compensated by the large earnings they obtain. The Chief Commissioner observes that the percentage of persons admitted to

the Dacca Lunatic Asylum in Bengal who had lost their intellect from the effects of ganja was from—

	Per cent.
1860 to 1867	45·4
1868 to 1870	34·7

It has been said that some ganja has been grown lately in this province. The cultivation should be at once checked." A copy of these remarks, together with the opinions of local officers, civil and medical, was sent to the Government of India in reply to the enquiry. There is very little in the opinions which goes to establish the injuriousness of the drugs, and it may therefore be taken that Sir Ashley Eden's strong expression of opinion embodies the reasons for which the Government of India concurred in absolute prohibition which was enforced from the beginning of the year 1873-74. Apparently Sir Ashley Eden relied largely upon the statistics of the Dacca Lunatic Asylum for his opinion. The arguments to be derived from these statistics have been considerably modified by the Commission's investigations. In 1878 the Government of India addressed the Chief Commissioner of Burma in the following terms: "In 1873 the sale and cultivation of ganja in British Burma were prohibited. In September 1874 the import of the drug by sea was also prohibited. These arrangements received the approval of the Government of India on the understanding that it would be possible by this means to prevent the use of ganja altogether in British Burma. Your present proposals show that it has not as yet been found possible, and tend to throw some doubt upon the policy of 1873 and 1874. I am therefore directed to request that you will be good enough to examine the result of the repressive measures already adopted, and favour the Government of India with your opinion as to whether it would be advisable to persevere in the attempt to prohibit absolutely the use of ganja in British Burma, or whether it would not be preferable to revert to a system of licensed sale of the drug upon payment of heavy duties." The Chief Commissioner, however, considered that "a return to the license system would be a retrograde step, and that the possession of ganja in British Burma should be altogether prohibited by law. The grounds for this opinion are that ganja is admittedly more baneful than opium; that as yet the drug is unknown to the Burmese, or at any rate is not used by them to such an extent as to become a luxury the sudden withdrawal of which would be felt; that in the Arakan Hill Tracts the total prohibition of ganja has worked well; and that the people of Burma at present addicted to its use are solely, it is believed, immigrant natives of India" (Excise Report for 1877-78). These views were accepted by the Government of India, and the provisions relating to Burma in Act XXII of 1881 were the result. From that date the subject was not mentioned in the Excise Reports for the next 8 years. In the report for 1890-91 the only notice is that one Burman was prosecuted for cultivation of ganja. In the report for 1891-92, 31 breaches of the Excise law in respect of ganja are mentioned, in which 27 convictions, involving 236 tolas of ganja, were secured. This was in the Arakan Division. There is a special statement for Upper Burma showing 12 tolas of ganja confiscated in Yew and 13 viss and 1 tola in Lower Chindwin. The same statement for 1892-93 shows 2,000 tolas of ganja as confiscated in Yew and 532 (or 352) in Upper Chindwin. There is still no mention of the subject in the reports.

693. A statement has now been furnished to the Commission showing the seizures of ganja for the past five years and during the first eight months of 1893-94.

Smuggling of ganja in Burma.

These are as follows:—

	Tolas.
1888-89	17,754
1889-90	626
1890-91	1,218
1891-92	2,430
1892-93	5,856
1893-94 (8 months)	30,353

In commenting on these figures, the Assistant Collector of Customs and Superintendent, Preventive Service (Mr. Culloden), says: "That there exists a demand for the article, and that high prices are paid for it no one can deny..... The illicit traffic is kept up with more or less of regularity, the largest quantities coming from the Madras coast. Advantage has also been taken of smuggling the drug by post..... Punjabis, Pathans, Natives of Upper India, and Madrassi sepoys are those addicted to the use of ganja. The attempts at smuggling have been more frequent since the introduction of the Punjabi element in the Police force..... No case of Burmans making use of ganja has ever been brought to my notice." In his oral evidence before the Commission, Mr. Culloden stated: "I have been in Burma since 1853, and my experience of ganja has dated since then. I have been in the Customs Department ever since. My jurisdiction extends along the river bank from Pegu river to Kemendine on the Irrawaddy..... I think that since 1873 the importation of ganja has been going on regularly without diminishing. I think that of late years it has increased very much. There are many more natives of India. That would explain increase. In regard to seizures, a sudden drop in the number may be due to a change in the practices of smugglers. Then we would not know how to search for and detect consignments until we learned their new ways. This would in turn lead to a rise in the number of seizures till their plans were changed. This is the only explanation I can give of the great drop in 1889-90 and the increase in 1893..... I hear and believe that there is a great deal of ganja in the country. I have been told by informers that the drug costs a rupee a tola." Mr. Lewis, senior Excise Officer in the town of Rangoon, who has been 32 years in Burma and 18 years in Rangoon, gives similar evidence; but he says that the price of ganja in the bazar is now only four annas a tola. He adds: "I am afraid, I must say, that the prohibition is ineffective in Rangoon. The consumers get their ganja all the same, and hundreds are getting a living by it ..... I do not believe that ganja could be stopped even by an army of officials and constant interference with the people. If they could not get it otherwise, they would send small quantities in letters. I do not know what would happen if ganja were not produced elsewhere; but so long as there is ganja available in India, they will have it in Burma. Our preventive measures undoubtedly lead to oppression. False charges are frequent..... Ganja is not only weight for weight cheaper than opium, but the ganja habit is a cheaper habit.....The Burman consumers, however, were very few. Burmans use ganja for their cattle, not for themselves. The few consumers abandoned the

habit on the prohibition. I do not think that the Burmans would ever take to ganja. During my thirty years' experience I have found that they do not take to it. They take it for their cattle only."

Failure of prohibition.

694. These opinions have been quoted at some length, as the Customs officers are in the best position for giving an opinion regarding the smuggling of ganja. But the majority of the witnesses who have means of knowing about the subject are of the same opinion regarding the failure of the prohibition to keep ganja out of the country. They also consider that nothing more than has been done can be done to render the prohibition effectual. The Commission are of opinion that the prohibition has not been effectual, and that strong reasons are required to justify its maintenance. In regard to this subject opinions are divided. Three Commissioners (1, 2 and 3), notwithstanding their admission that the prohibition is ineffectual, are in favour of maintaining it. Three Deputy Commissioners (12, 14 and 10) hold the same view. Their object is to keep the drug from the Burmans. Three Deputy Commissioners (9, 16 and 6) would be willing to see a system introduced which would enable the natives of India to get the drug on payment of duty, provided the Burmans were not allowed to have access to it. The Bishop of Rangoon, who was 20 years as a Medical Missionary in Madras, and has spent 11 years in Burma, seems to incline to the same opinion.

Conclusions of the Commission regarding Burma.

695. The Commission have formed the opinion that the Burmese have no natural propensity for the drug. Had this been the case, there would have been some evidence of its use by them before the prohibition was issued. In the report for 1872-73 it is stated that ganja was "obtainable in any quantity in Upper Burma, although it is not used by the Burmans." There is evidence that it was produced to a considerable extent in Upper Burma before British rule, or at least that it was imported thither from the States adjoining it. Yet the habit does not seem to have been formed by the people. Nor is there any evidence to show that the Burmese in Lower Burma ever took to the drug either before or since the prohibition, though it is clear that there was no great obstacle to their doing so. While holding this opinion, the Commission have no desire to advocate the entire removal of the prohibition. They think it is unnecessary to interfere with it so far as it concerns the Burmans. They have no desire for the drug, and might not take to it in the future any more than they have in the past; but there is no objection to keeping it out of their reach. In regard to the natives of India, the case is different. The present illicit traffic is demoralising to them and to the Government servants who are powerless to deal with it. The strong justification necessary to maintaining the present state of affairs is not to be found in the conclusions at which the Commission have arrived in regard to the moderate use of the drug. It would, in the opinion of the Commission, be better to license this use of the drug under proper control and taxation than to maintain an unworkable prohibition. No change in the law would be required, as the Chief Commissioner has the necessary powers under the Excise Act in force. The Commission, it is true, do not much believe in the possibility of restricting the use of an intoxicant by registration or otherwise to special classes of the population. The experience which will be gained in regard to the recent measures for regulating the supply of opium in Burma will show whether their view is

correct or not. But in the case of ganja there seems little or no risk of the Burmese taking to its use in contravention of the law, inasmuch as they seem to have no predisposition to do so. Under these circumstances the Commission would recommend that where there is a demand for the hemp drugs among natives of India in Burma, provision should be made for meeting this demand by a licit supply under the same regulations as are in force in other non-producing countries, the prohibition of cultivation being maintained as well as that of the use by the Burmans.

CHAPTER XVII.

SYSTEMS OF NATIVE STATES.

Systems in Native States.

696. The foregoing chapter contains the views of the Commission on the introduction throughout British India of a system of excise in regard to hemp drugs which will be ultimately uniform. But this uniformity of system must necessarily fail of its purpose unless the co-operation of the Native States which are interlaced with British territory is at the same time secured. A brief review of the systems at present in force in Native States is therefore necessary, together with some remarks as to the desirability of securing the adoption of a similar system in those States. The material at the disposal of the Commission in regard to the States is somewhat incomplete and fragmentary, but a good deal of information of a general character has been obtained which will enable the Commission to come to some decision on the subject.

States in the Himalayan tract where the plant grows wild.

697. The conditions under which the wild hemp is found have been detailed in Chapter III. Generally it may be said that the wild growth only thrives in the Himalayan tract. The Native States falling within this tract are Kashmir, some of the Punjab Hill States, Garhwal Tehri and Rampur in the North-Western Provinces, Nepal, Kuch Behar, and the Assam Hill States. In all these States bhang is produced; but as the control of bhang in similarly situated tracts in British territory has been pronounced impracticable, this fact need not interfere with British excise arrangements. Kashmir apparently produces no charas properly so called, and all the charas which comes to the Punjab through Kashmir is accounted for under the Punjab system of registration. A little charas comes from Garhwal and from Nepal, but the amount is not sufficient to disturb British arrangements. The cultivation of ganja is prohibited in Kuch Behar, which receives its supplies from Rajshahi, the duty being credited to the State. Ganja to a very small extent is said to be imported from Nepal, and there is considerable smuggling of inferior ganja from the Assam Hill States which has been noticed in Chapter XV. With this last exception, it may be stated generally that the system or want of system in regard to hemp drugs in all these States is a factor which need not be taken into account in the excise system of British India. And as regards the Assam Hill States, it is probable that no further preventive measures can be taken at present than those already adopted, *viz.*, prevention through the Assam Excise establishment when the drug is brought into British territory for sale. There is no system in force in the Hill States, and for some time to come it is not likely that any can be expected.

In other States the production of ganja is the most important feature.

698. The extent to which the hemp drugs are produced in the Native States in other parts of India, and exported from them to the various British provinces, has been detailed in Chapters IV and VII of this Report, so far as can be gathered from the information received. It is mainly in respect of the production of ganja that the arrangements in these States have any perceptible effect on the British excise system. The conditions of the principal States or groups of States in this respect will be briefly noticed in the following paragraphs as well as the systems in force.

699. The cultivation of hemp for ganja in Hyderabad is said to amount to 300 or 400 acres. Bhang is the refuse of the ganja so produced. There is no restriction of cultivation, but the right of selling the drugs is auctioned, and the cultivators are bound to dispose of their produce to the licensee. There are 270 shops for the sale of ganja and bhang and 50 for majum. In small districts the contract of sale is given with that of certain poisons (arsenic, strychnia, and aconite) and opium. For foreign import or export of ganja a duty of Rs. 10 per maund is levied, and of bhang Rs. 3-5 per maund. The imports of ganja as given in the State memorandum average for five years 79 maunds, and the exports 9 maunds only. But there are no reliable statistics. The Director of Agriculture puts the outturn at 5 to 6 maunds per acre, which would give a result of from 1,500 to 2,400 maunds per annum. Of this, only an average of 300 maunds is traceable as having been transmitted by railway. There is no record of the ganja transmitted by other means.

Hyderabad.

The Hyderabad State marches with the Madras and Bombay Presidencies, Berar, and the Central Provinces, but only for a short distance with the last named. There are no complaints of smuggling from Hyderabad into the Central Provinces, though smuggling from Berar is mentioned. If ganja is systematically treated in Madras, Bombay, and Berar, the arrangements will be incomplete unless a similar change is made in the Hyderabad State; and as the regular cultivation in the latter appears to be confined to certain definite areas, control will probably be quite feasible should the Darbar agree to exercise it. For the present, however, the existing arrangements under which the produce must all be made over to the licensed vendors and a tax levied on all imports and exports will, if they are observed, be sufficient to check the export of ganja to British provinces. When by reason of the perfecting of the system in British territory the inducements to smuggle cheap ganja from Hyderabad are increased, it will then be advisable to suggest to the State the desirability of exercising more complete control over the cultivation of the plant and its produce.

700. The administration of excise in Mysore in respect of hemp drugs is based upon Act XXII of 1881, which is in force in the State, and is in advance of that of both the presidencies which adjoin it. Cultivation is forbidden except under license, and the produce of all licensed cultivation must be sold to the licensed contractor or exported under a pass. But licensed cultivation has been practically abandoned; and though it is stated in the memorandum that illicit cultivation and smuggling are not carried on to any appreciable extent, there seems some doubt whether this view is correct. Mr. McDonnell, the Special Assistant Excise Commissioner, states that, "owing to the heavy dues imposed by the State (Rs. 24 per Indian maund) and the abnormally low price of ganja across the frontier, there are strong inducements to commit a fraud on the Mysore revenue." Thus, although the climate and soil of the State are well adapted for the production of the ganja plant, the regulations introduced by the State authorities for controlling its production have had the effect of stopping it altogether owing to the want of system in British territory and the facility with which it is procurable thence at a much lower rate; and a large amount of the ganja

Mysore.

imported pays no duty. In regard to this, Mr. McDonnell says: "Mysore is heavily handicapped by the extensive smuggling of ganja from Her Majesty's territory."

The system of licensing sale and levying fees therefor in Mysore may be thus briefly described. A contract is given to a single person on condition that—

(1) he pays duty on wholesale vend to the Darbar at the rate of 6 annas per sér for ganja and 2 annas for majum, etc.;

(2) he sells at fixed rates to retail vendors, *viz.*, ganja 10 annas per sér, and majum, etc., 4 annas per sér;

(3) he sells to retail vendors in quantities not less than 10 sérs of ganja and 5 sérs of majum in Bangalore and Mysore, and 5 sérs of ganja and 2 sérs of majum elsewhere;

(4) the drugs shall be of good quality, and that registers are kept, etc.;

(5) he guarantees a fixed sum to the Darbar.

The sér in Mysore consists of 24 tolas. The amount guaranteed appears to be fixed by tender. There are 57 wholesale shops licensed free, and 109 retail shops which are not ordinarily sold by auction, but licensed free, except in Mysore and Bangalore, where Rs. 3 per mensem is paid for each license. Retail vendors have to sell to the public at the rate of 13 annas per sér for ganja and 6 annas per sér for bhang, and may not sell more than 4 tolas to any person on the same day. Charas is unknown, and bhang is the refuse of ganja.

Thus there is a very complete system at work in this State, though some of its details may be open to criticism, and the principal difficulties attending its administration arise from the want of system in British territory. Ganja is freely imported into the State from Madras, and it has been shown (Chapter VII) that it is also probably imported from the Dharwar district in Bombay. This appears to the Commission to afford a cogent argument for the introduction of control in the Madras and Bombay Presidencies.

Baluchistan.

701. The Commission have little information regarding Kalat and Las Beyla. But there is no export of the drugs from these States to British India, so the matter is of no importance.

Baroda.

702. Prior to 1892 there was no restriction on the preparation or sale of the hemp drugs in Baroda. A State monopoly of sale was then introduced. Cultivation of the plant is not prohibited, but it is reported to exist only in one village, and to a very limited extent. No exports to British territory are reported, and there is evidence to the effect that since the introduction of the license system smuggling from the State into British territory has almost entirely ceased. A large amount of the drugs is said to be imported from other provinces or States. A customs duty is levied on the imports, but the amount is not stated. There are 101 shops for sale of ganja, etc., and as many as 157 more have been sanctioned, but not opened. Charas is not used. In this State the arrangements are, therefore, fairly complete. If owing to the introduction of a more systematic treatment the price of ganja in the Bombay Presidency were to rise considerably, cultivation in the Baroda

State would very probably revive; and as there is now practically no cultivation, the present time would be opportune for moving the State to introduce a thorough system of control in this respect also.

Central India Agency.

703. The information regarding the excise administration of the Native States in Central India in respect of hemp drugs is very incomplete. From Gwalior, where there is a considerable amount of ganja produced, no information has been received except that which has been furnished through the North-Western Provinces. Through the courtesy of the Agent to the Governor-General, a useful memorandum has been recorded by Mr. R. H. Gunion, of Indore, which puts in a compendious form all the information obtained from the other States in the Agency. The Minister to His Highness the Maharaja of Holkar has also given a full account of the administration of that State.

There is cultivation of the hemp plant for the production of ganja in Indore, Baghelkhand, Dewas, Bhopawar, and Gwalior, and possibly also in Bhopal and Western Malwa. There appears to be no restriction of cultivation in the Central India Agency, and Mr. Gunion thinks that there is no system of licensing sale of the drugs except in Indore and Rewa, though the Commission have ascertained from other sources that sale is licensed in Gwalior and Bhopal. Mr. Gunion's opinion that there are no restrictions on manufacture or on import and export of the drug, but that duties are levied on it as on other merchandise, appears to be correct.

Indore.

704. In Indore the average cultivation, which is said to be on the decrease, is reported by the State officials above mentioned to be about 181 bighas or 113 acres, and the average imports and exports of ganja 153 maunds and 377 maunds respectively; but in 1892-93 the imports amounted to 84 maunds and the exports to 1,318 maunds. It is therefore clear that the exports exceed the imports. Mr. Stoker says that a little ganja is imported into the North-Western Provinces from Indore. Mr. Drake-Brockman says that ganja is largely grown in the Sanawad pargana of Indore, which separates the Kanapur Beria tract from the rest of the Nimar district in the Central Provinces, and there is thus a considerable area into which the introduction of Indore ganja is practically inevitable. Accordingly in 1879 a suggestion was made to the Agent to the Governor-General that exports from Indore territory should be taxed and only permitted under formal pass, and a duty of Rs. 7 per maund was fixed by the Darbar. This seems to have checked smuggling, for the evidence from the Central Provinces is against its prevalence, though some still exists. Mr. Gunion's estimate of the amount of ganja and bhang annually produced is 900 maunds. The right to sell by retail is auctioned. There were 45 licenses in 1892-93. The income from this source appears to be on the increase, and this is the case also as regards the fixed duties since 1886-87. In the latter year they amounted to Rs. 461. In 1892-93 they were Rs. 3,111.

It is evident that the Indore State possesses considerable facilities for the production of ganja and for its distribution in British territory, and in the interests of the system of administration proposed for British provinces it is extremely desirable that the production of the drug in this State should be brought under control.

Gwalior.

705. All that is known about the administration of the hemp drugs in Gwalior is that the cultivation is reported to be about 400 acres; that a duty of Rs. 5 per maund is levied on all ganja exported to British provinces, and Rs. 2-8-0 per maund on ganja transported from one place to another in the State; and that the cultivator may only sell to a licensed vendor. The Commission also have information that the cultivator pays Rs. 12 per acre over and above his fixed rent; but whether this payment is made to the State is not clear. There is a fixed rate for retail sale, 4 annas per sér. Mr. Stoker is of opinion that the Gwalior ganja is gaining ground in the North-Western Provinces, and is being substituted for the Khandwa ganja, while both together are ousting the supply of Bengal ganja. The cultivation is said to be confined to three tahsils of the State—Antri, Sipri, and Kalaras; so the control of cultivation would probably be a simple matter; and if such control can be brought about, it would greatly facilitate the North-Western Provinces administration. Some charas is produced, but apparently in very small quantities; bhang of a superior quality is produced at Ujjain and Sipri. The State is bound by special arrangement to prevent export into British territory. (Gwalior Salt Agreement, Aitchison, No. XXI, Article 6.)

Bhopal.

706. All that has been ascertained in regard to Bhopal is that there is a licensed contractor for each pargana who sells by retail in his own shop, and authorises others to do so as his agents. Mr. Drake-Brockman says that local transit dues are levied, but they are not sufficiently high to check transport into the neighbouring districts of the Central Provinces. Mr. Gunion says that about 100,000 persons are said to use one or other of the hemp drugs. The Commission have no information regarding cultivation in this State. It adjoins the Central Provinces, and control of the hemp drugs is very desirable from this point of view.

Baghelkhand Agency.

707. The principal State in the Baghelkhand Agency is Rewa. There is some cultivation for ganja, but no particulars have been ascertained. There are contractors for sale of the drugs who are said to pay a fixed duty and license fees to the State. The greater part of the population are Vaishnavas, and the population in general are said to be opposed to the use of the drug. A little charas is said to be imported from Patna. The Agency lies between the North-Western Provinces, the Central Provinces, and Chota Nagpur, and any want of control in the matter of hemp drugs would probably have a serious effect on the excise administration of those provinces.

Bundelkhand Agency.

708. There is no information in the memorandum regarding the administration of the States of the Bundelkhand Agency. But Mr. Stoker mentions the Agency as one of the main sources for supply of ganja to the North-Western Provinces. In all the States, he adds, there is some duty on export, but it is variable and unequal. In one place it is 2 annas per rupee of the price, which would be about Re. 1 to Rs. 2 per maund. In another it is said to be Rs. 1-9-0 on each purchase irrespective of quality. But these rates require confirmation. Mr. Stoker is not sure that all the ganja which comes from these States is of local growth, and he suspects some of it comes from Gwalior or Khandwa originally. The plant is, however,

said to be cultivated to some extent, and the produce not to be distinguishable from Gwalior ganja. Mr. Stoker notes that this source of supply is capable of extension. The capital and a great part of the Chirkari State is situated in the middle of the Hamirpur district in the North-Western Provinces. The country is wild and mountainous, and prevention of smuggling is impossible. From the Panna State there is considerable smuggling into the Damoh district of the Central Provinces. It is very desirable in the interests of the excise administration of the North-Western Provinces that the cultivation and production of the drug should be controlled in this Agency.

Bhopawar Agency.

709. Mr. Gunion says that all over the Bhopawar Agency the hemp plant is cultivated for ganja and bhang, rarely for charas. The production is limited, and, except in the parts adjoining British Nimar, only for the personal use of the cultivators. No other information has been obtained. Mr. Robertson, Deputy Commissioner of Nimar, says that ganja smuggling from the Native States which border on Nimar, though it no doubt exists, has never been a prominent matter in Nimar. It is the general opinion, however, that a good deal of petty smuggling exists.

Western Malwa Agency.

710. Mr. Gunion mentions a kind of ganja called 'gorakhi,' which is said to be made from the wild plant in the Jaora State of the Western Malwa Agency. The Commission are in possession of a statement made by Surgeon Lieutenant-Colonel Caldecott, Agency Surgeon, that there is cultivation for the production of charas, bhang, and ganja all over Malwa, but he is unable to say to what extent. The States of this Agency (Jaora and Rutlam) do not adjoin British territory.

Rajputana Agency. Jeypore.

711. In the Jeypore State there is practically no system of administration of the hemp drugs. Customs duty is levied on import and export at the rate of Rs. 4 per maund for ganja, Rs. 20 per maund for charas, and Re. 1 per maund for bhang. There is also an inland customs duty of 4 annas per maund on bhang. There is no restriction in regard to cultivation, manufacture, sale, or possession of the drugs. As noticed in the chapter on cultivation, it is stated in the memorandum that 10,000 maunds of bhang are produced; indicating a large rural consumption if the figure is correct; for only 27 maunds are said to be exported. Ganja and charas are imported, not produced in the State. Jeypore does not adjoin British territory, and further control is not at present essential to the success of a system of administration in the British provinces.

Jodhpur.

712. Duties are levied in the Jodhpur State as follows:—

	Import duty per maund.	Export duty per maund.	Transit duty per maund.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Ganja and Charas	4 8 0	4 8 0	3 0 0
Bhang	0 2 0	0 2 0	0 2 0

It is said that a Government duty of Rs. 2 per maund is charged on the import of ganja; but this is not further explained. There is no restriction on the cul-

tivation of hemp, which is not systematically grown, but in a few villages seeds are sown round the fields where crops are raised. The import of ganja and charas under parwana from the Residency amounted to 1,735 maunds during the ten years 1883-84 to 1892-93. The imported ganja mostly comes from Indore. The ganja produced from the sporadic growth of the plant is called 'makuria,' and being of very inferior quality is said not to be offered for sale. A contract for sale of the drugs has been given since 1880 in the towns of Jodhpur and Pali, which is auctioned to the highest bidder. There are 14 retail vendors in Jodhpur, all of whom are under the control of the contractor, who himself has two shops in the town. The retail vendors are ordinary shopkeepers, who sell the drugs along with other articles. There are no retail vendors in Pali. Elsewhere there is no restriction on the sale of the drugs. Jodhpur does not adjoin British territory.

Udaipur.

713. No memorandum has been furnished from Udaipur. The State does not adjoin British territory. There seems to be a certain amount of production of ganja and bhang, but the use of ganja and charas seems to be very limited.

Bikanir.

714. The excise of the drugs was introduced in 1893. There is no restriction on cultivation, but the cultivators may only sell their produce to the State contractors. Contracts for wholesale vend are sold by auction at the tahsils, and the contractors obtain licenses for their retail vendors, and are permitted to sell by retail themselves. The shops for retail vend are not auctioned. The contractor fixes the prices for retail sale, subject to a minimum fixed by the State officials. A customs duty on imports is levied at the rate of Rs. 20 per maund for ganja and charas and Rs. 5 per maund for bhang. Under an agreement with the British Government, the export of intoxicating drugs from the State into British territory is prohibited. (Bikanir Salt Agreement, Aitchison, No. CXXVIII, Article 5). The observance of this provision will render any further action in regard to this State in the interests of the British excise administration unnecessary at present.

Alwar.

715. There is no restriction on cultivation, but bhang only is produced on well lands and on the borders of fields. Ganja is unknown; a little charas and bhang is imported. The monopoly of the import and sale of the drugs is granted to a contractor, together with that of poppy and opium, for a fixed sum. There is no duty on import, but an octroi duty of 10 annas per maund is levied on bhang. The contractor is at liberty to make his own arrangements regarding sale of the drugs. The number of retail shops in 1893 was 44. No limit has been fixed for retail sale or possession. Alwar adjoins the Delhi Division of the Punjab.

Bhartpur.

716. The hemp drugs are said not to be produced in Bhartpur. A customs duty on imports is levied at the rate of Rs. 10 per maund on charas and Rs. 5 per maund on bhang. There is no further restriction apparently. The drugs are imported. There is apparently no cultivation now, though some formerly existed. Bhartpur adjoins the North-Western Provinces. The conditions existing in this State are not likely to affect British excise administration.

717. The monopoly of vend in the Kotah State is auctioned to contractors. Besides the revenue thus realised, a duty of Re. 1 per maund is levied on ganja imported into the State, and the same on bhang brought into the town of Kotah. A transit duty of 8 annas per maund is also charged on ganja and bhang. Charas is not imported. There is a small local production of ganja and bhang, but no regular cultivation. It is stated that there is a "ruling" of 1881 about buying, selling, and possessing intoxicating drugs, but it is not enforced. This State does not adjoin British territory.

Kotah.

718. Beyond the levy of a customs duty at the rate of Rs. 20 per cent. of value on all hemp drugs in Tonk and Aligarh, Rs. 6 per maund in Chabra, and Rs. 8 per maund in Sironj, there is no excise administration in respect of the drugs in the Tonk State. A proposal to draw up a set of rules is under consideration. Ganja and charas are imported, not produced. Bhang is produced in the State and imported from Jeypore. The State does not adjoin British territory.

Tonk.

719. An import duty of 8 annas per maund of 35 sérs on ganja and bhang and of one anna per maund on charas is levied in the Jhallawar State, and it is said that there are local dues of 2 annas per maund on ganja and bhang, while one per cent. is levied on all sales of either drug, weighment dues being also levied when they are sold by weight. There is a licensed farmer of the drugs in the cantonment. Beyond this, there is no excise system in respect of hemp drugs. The extent of cultivation is about 30 acres, producing about 155 maunds of ganja and 30 of bhang. The trade returns do not distinguish between ganja and bhang: the average import of both drugs is said to be 105 maunds, and the export 120 maunds. Charas is not used. The State does not adjoin British territory.

Jhallawar.

720. Import and transit duties are levied in the Bundi State at the rate of 8 annas per maund on all hemp drugs imported into or passing through the State territory. Beyond this there is no system of administration in respect of hemp drugs. It is stated that the drugs are not manufactured in the State, but that cultivators grow hemp on land irrigated by wells as other crops. The drugs are imported from other States. The import of bhang is large, averaging 9,385 maunds; that of ganja and charas is small, amounting to 100 and 25 maunds respectively. The total import duties amount to Rs. 4,440 and transit duties to Rs. 610. The State does not adjoin British territory.

Bundi.

721. In Dholpur import duties are levied on ganja and bhang at Rs. 4-4-0 per maund and on charas at Rs. 1-1-0 per sér. In the Sri Mathra Estate the duties are—ganja Rs. 4-8-0, charas Rs. 6, and bhang 6 annas per maund. Export duty is also levied—ganja 9 annas per maund, charas Rs. 3 per maund, and bhang 3 annas per maund. There is one contractor for the whole State, who appoints his own sub-contractors in the parganas. Apparently the whole trade, both wholesale and retail, is in the hands of this contractor. The cultivation of intoxicating drugs is prohibited without permission of the Darbar, and there is no manufacture of the drugs in the State. The imports are by rail and road from British districts,

Dholpur.

Gwalior and Patiala, under passes granted by the Collectors or Political Agents concerned. The traffic is not large. Dholpur adjoins the North-Western Provinces.

Banswara.

722. In Banswara no memorandum has been furnished, but the Commission have information from the officials that ganja and bhang are produced. The State adjoins the Bombay Presidency. Nothing is known of the system of excise administration.

Serohi.

723. A statement has been furnished for Serohi which shows that licenses to sell ganja are given for seven places in the State, and a revenue averaging Rs. 386 per annum realised for license fees (Rs. 863 for 1892-93) and Rs. 145 for fixed duty. There are license holders, but they keep no record. Only ganja is imported, the average being 32 maunds per annum. Cultivation is unrestricted and not recorded. The Kotwal of Serohi estimates the outturn of ganja produced in the State at 8 maunds, and bhang at 300 maunds. No exports are shown. It is stated that the whole of the ganja and bhang produced in the country, averaging one maund of the former and 40 maunds of the latter, is recovered from the cultivators and given in charity and sent to the temples of Mahadeo, and some is used in liquor. The State does not adjoin British territory.

Kerowli.

724. Customs duties are levied in the Kerowli State on imports at the rate of Rs. 2-8-0 per maund on ganja, Rs. 10 on charas, and Re. 1 on bhang. During the Shivratri fair in February the duties are suspended. The right of retail vend at three towns is sold by auction, and there are 8 licenses for retail vend. No further control is exercised. The plant is cultivated for bhang, and ganja is imported. The transactions shown are very small, but the license fee averages Rs. 1,157 per annum. The State does not adjoin British territory.

Kishengarh.

725. The only system of control in force in the Kishengarh State consists in the levy of duties (apparently import duties) at the rate of Re. 1-8-0 per maund on ganja and charas and 4 annas on bhang. The farming system used to prevail, but has been abandoned. It is now proposed to increase the duties and to license vendors. The transactions are small. Kishengarh adjoins Ajmere.

Jaisalmir.

726. In Jaisalmir there is provision for levying customs duties, but it is stated that there has been no import or export of hemp drugs for the last ten years, and that the drugs are not sold in the State. There is, however, a little cultivation for ganja and bhang, which is purchased by the consumers from the cultivators. Jaisalmir adjoins Sind, and a small amount of ganja and charas is said to be smuggled into Sind through this State.

Shahpura.

727. In this small State import and export duties are charged at rates not mentioned. Transit duty at 3 pies per sér is also levied on bhang exported to foreign States in addition to the export duty. There is no further control of any kind. In future it is proposed to issue licenses to a limited number of persons at a few selected places.

Partabgarh and Lawa.

728. No information has been received regarding these small States.

Hill States lying between Bengal, Central Provinces, and Madras.

729. It will be convenient next to notice together that tract which lies enclosed between Bengal, the Central Provinces, and Madras, comprising the Tributary States of the two first and the Agency tracts of the last named province. In this manner only is it possible to consider systematically and thoroughly the question of bringing the excise arrangements in respect of hemp drugs which prevail in this tract into some conformity with the general principles recommended by the Commission. This tract may be divided into four parts, *viz.*, the Chota Nagpur Tributary Mahals and the Orissa Tributary Mahals, both under the Bengal Government; the Chhattisgarh Tributary States, under the Central Provinces; and the Agency Tracts, under the Madras Government. The following table shows the area, population, and revenue of each of these groups :—

—	No. of States.	Area.	Population.	Revenue.
		Sq. miles.	No.	Rs.
Chota Nagpur Tributary Mahals	9	16,027	890,859	1,86,327
Orissa Tributary Mahals	17	14,387	1,696,710	11,54,975
Chhattisgarh States	10	26,526	1,648,811	7,88,591
Agency Tracts, Madras	...	19,167	1,294,244	Not available.

Tributary States of the Central Provinces.

730. In the Tributary States under the Central Provinces the cultivation of ganja has been stopped at the instance of the Local Administration, and a supply of ganja is now furnished to these States from the Government storehouse at Khandwa. The system is that the drugs are supplied to the chiefs at cost price (the cost going to the wholesale vendor, and the Government realizing nothing), and that the chiefs must adhere to the provincial price of Rs. 3 per sér in their sales to the retail vendors. The only exception is in the case of the three Western States of the Raipur district, in which under special arrangement half the duty goes to Government. Elsewhere the whole of the duty is realized by the chiefs. The present state of affairs is thus described by the Political Agent, Chhattisgarh. It should be explained that his report refers to all the Chhattisgarh States, including the four Western States which are detached from those on the Bengal or Madras border: "The only States in which the hemp plant has never been cultivated for the production of drugs are those of Kawardha and Kalahandi. In the other twelve such cultivation was at one time fully indulged in, but in all it has now been completely suppressed. The system in force may be summed up in a word as being identical, so far as the local circumstances permit, with that which prevails throughout the Central Provinces. The principles observed are practically, though not in all cases formally, based on the provisions of Act XXII of 1881 and of the Central Provinces Excise Manual. Bhang and charas are unknown in the Feudatory States, except in Nandgaon, where a little bhang is consumed." This complete arrangement suffers, however, from the smuggling

of ganja into some of the Feudatory States from the States or Agencies in Bengal and Madras. The Political Agent says:—"The States of Raigarh, Raira Khol, and Sonpur all complain bitterly of the smuggling into their territories of ganja from the adjoining Bengal States. The reports from the Patna State have been somewhat conflicting. There seems no doubt that there has been in former years considerable ground for a similar complaint here; but it seems that the evil has of late been considerably reduced by improved police arrangements. Both Kalahandi and Bastar complain of smuggling from the Jeypore State in Madras."

Tributary States of Chota Nagpur.

731. In the Chota Nagpur Tributary States, Seraikela and Kharsawan, the cultivation of ganja is prohibited. Ganja is imported from Bengal. There is a contractor in Kharsawan who holds at the same time the monopoly of sale of opium. There are four shops in Seraikela the licenses for which are sometimes sold by auction, and sometimes granted at fixed rates. In the other States there is no very definite system of excise administration in respect of hemp drugs. There are no shops for the sale of the drugs, though one formerly existed in Gangpur and Jashpur, which derived their supplies from the Government gola at Ranchi; and Mr. Grimley, Commissioner of Chota Nagpur, says that he gave a license some months ago to a vendor in the Gangpur State to import ganja, though he cannot definitely say that the shop has been opened yet. Duty on the cultivation of ganja grown by the people for their domestic use is levied in Udaipur, Gangpur, and Bonai. In Gangpur it is 4 annas per plant, and in Bonai 1 anna 6 pies per plant. The amount of the Udaipur duty is not mentioned. In 1883 the Commissioner of Excise, Central Provinces, complained that untaxed ganja from Sirguja, Gangpur, and Udaipur was imported into Sambalpur and Bilaspur; and the Commissioner, Mr. Hewitt, ordered the chiefs not to allow ganja to be grown by any one without their permission, and to keep lists of those who grew ganja and see that they did not grow more than they wanted for their own use, and that no one was allowed to sell ganja. In regard to this order, Mr. Grimley, Commissioner of Chota Nagpur, says: "I am not prepared to say that the Rajas keep the lists prescribed; but I think the spirit of the order is carried out. I think the chiefs are very loyal and willing to do what they are told in regard to such matters."

Tributary States of Orissa.

732. The Tributary States of Orissa have for many years constituted the principal difficulty of the Bengal Government in regard to its excise administration of the hemp drugs.

It was first in 1878 that the attention of Government was seriously directed to the illicit trade from the Tributary States, and apprehensions for the safety of the excise revenue in Orissa were entertained. At this time the existing rules permitted the import into Orissa of Garhjat ganja and bhang under a system of passes and at a fixed duty of one rupee a sér. Four proposals were laid before Government—(1) to entirely prohibit the cultivation of the hemp plant in the Tributary States, or (2) to prohibit the cultivation within three miles of British territory; (3) to prohibit the importation of the drug into British territory, or (4) to raise the duty on imported Garhjat ganja to Rs. 4 a sér, thus equalizing it with the duty on Rajshahi ganja. The second and fourth proposals were adopted: cultivation within three miles of the boundary was prohibited, and the duty on imported ganja was raised to Rs. 4 a sér.

These measures proved ineffectual; and, although the consumption of Rajshahi ganja may have increased somewhat in all three districts of Orissa, it was believed that smuggling still continued to a considerable extent. The policy of total prohibition of cultivation naturally suggested itself again, and in 1884 was carried out in Mohurbhanj, which happened to be under the direct control of the Bengal Government. Rs. 300 a year was given to Mohurbhanj as compensation, and Rajshahi ganja was imported into the State under the ordinary Excise rules.

In June 1882 the importation of Garhjat ganja and bhang into British territory was entirely prohibited, but it was not till 1884 that the prohibition was actually enforced. Further, from the same year (1882) the policy was adopted of levying duty in Orissa on Rajshahi ganja at rates lower than elsewhere in the province. Attempts were also made to entirely suppress cultivation in several of the States with the co-operation of the chiefs, and in 1889 the Superintendent of the Tributary Mahals reported that prohibition had been enforced in eleven of the States, but that the chiefs of four other States objected to the measure.

In 1889 the Bengal Government finally concluded that the experiment of entirely prohibiting cultivation must be abandoned as useless and inefficacious, and that the only way to prevent smuggling was to legalise importation under suitable regulations. Doubts were also entertained as to the real nature of Garhjat ganja. It was suggested that Garhjat ganja in a particular form was looked upon as an absolute necessary of life with certain influential classes in Puri, and that injury might be done by encouraging the use of the strong Rajshahi drug in place of the milder local article. The Government after some hesitation arrived at the distinct conclusion that Garhjat ganja was taken as a drink and not smoked, and that it was "on a different footing altogether from the well known deleterious drug imported from Rajshahi." It was accordingly proposed to legalise the importation of Garhjat ganja at a duty of eight annas a sér (the rate prevailing in Bengal for bhang), and at the same time the orders prohibiting cultivation, whether within the three miles limit or not, were withdrawn.

In 1890, after further consideration and with fuller information on the subject, the Bengal Government altered the opinion they had formed that Garhjat ganja was merely a form of bhang, and arrived at the contrary conclusion, *viz.*, that Garhjat ganja is a true ganja like the Rajshahi article, but inferior, and that it is used for smoking exactly as that drug is. The Government of India were accordingly requested to sanction a duty of Rs. 2-8-0 a sér on Garhjat ganja, which was done.

In December 1890 the orders prohibiting the possession of Garhjat ganja in Orissa were rescinded, and in March 1892 orders regulating its import were issued.

From 1st April 1893 the duty on Garhjat ganja was raised to Rs. 3-8 a sér to assimilate it with a rise in the duty on Rajshahi ganja.

Under existing rules, any licensed wholesale or retail vendor may import Garhjat ganja under a pass from the Collector, for which a fee of Rs. 2 is charged.

The minimum amount which may be imported is one maund at a time. With a view to the prevention of smuggling, the maximum of possession of Garhjat ganja has been reduced from 20 tolas to 5 tolas since May 1892.

Thus the following systems have been in force:—

(1) Prior to 1878 unrestricted cultivation in the Tributary States and legal import into British territory at a duty of one rupee per sér, which was considerably below the duty on Rajshahi ganja.

(2) From 1878 to 1882 suppression of cultivation within a three-mile limit and legal importation at Rs. 4 a sér, *i.e.*, at 8 annas higher than the duty on Rajshahi flat ganja.

(3) From 1882 to 1884 absolute prohibition of importation of Garhjat ganja, with duty rates on Rajshahi ganja in Orissa lower than those prevailing in the rest of Bengal. The three-mile limit of cultivation was maintained.

(4) From 1884 to 1889 absolute prohibition of importation of Garhjat ganja, with duty rates on Rajshahi ganja in Orissa lower than those prevailing in the rest of Bengal. Continuance of the three-mile limit of cultivation and attempted total prohibition of cultivation in the Tributary States.

(5) From 1889 to 1890 absolute prohibition of importation of Garhjat ganja, with duty rates on Rajshahi ganja in Orissa lower than those prevailing in the rest of Bengal. Unrestricted cultivation in the Tributary States whether within or beyond the three-mile limit.

(6) From 1890 to 1892 legal importation of Garhjat ganja in quantities not less than 8 maunds at a time, at a duty of Rs. 2-8-0 per sér, which is considerably lower than the duty on Rajshahi ganja. Duty rates on Rajshahi ganja in Orissa lower than those prevailing in the rest of Bengal, and unrestricted cultivation in the Tributary States.

(7) The existing system is the same as (6), except that there has been a rise of duty and a reduction of the minimum of possession of Garhjat ganja with a view to preventing extensive smuggling. The minimum amount of Garhjat ganja which may now be imported at one time is one maund instead of eight maunds. The rates of duty in Orissa from 1st January 1894 are—

	Rs.	A.	P.
Rajshahi ganja—			
Chur	7	8	0
Round	6	4	0
Flat	4	8	0
Garhjat ganja	3	8	0

Meanwhile the smuggling of Garhjat ganja and bhang continues unabated. This fact is abundantly proved by the evidence.

Remarks on the administration of Orissa Tributary States.

733. There are two points specially noticeable in this summary of the proceedings of the Bengal Government in regard to the hemp drugs of the Tributary States: first, that the policy has undergone several changes; and, secondly, that it has been framed solely with reference to the Orissa Division. In regard to the first of these, the Commission draw attention to the remarks made by Mr. H. G. Cooke, Commissioner of Cuttack, who says: "I believe a persistent policy would soon effect all that is desired. I believe it would be much better to have a persistent policy than a policy of vacillation as in the past, which is perhaps inseparable from a struggle against smuggling." The Commission further think that the matter requires to be approached with more consistent regard to the circumstances and requirements of the States themselves, and the representations of the Central Provinces Administration. And what appears to them to be required is that after full consideration of these conditions, as well as the excise administration of the Orissa Division, the Bengal Government should induce the chiefs of the Tributary States to introduce into their territories such a system of control as will restrict the production of the drug and remove the complaint of smuggling, whether into Orissa or the Central Provinces. That this is not an impossible task may be gathered from the past history of results achieved by the Superintendents of the Tributary Mahals and from the evidence of Messrs. Toynbee, Cooke, and Stevenson. The Commission do not feel called upon to say what the system should be. If prohibition of cultivation be thought the best course, the Tributary States of the Central Provinces furnish an instance of its feasibility. If it is thought best that the States should not be deprived of the local supply, the system generally recommended by the Commission for British provinces would probably be applicable. But it is important that the matter should at length be fully and finally dealt with.

Agency Tracts of Madras.

734. The Agency Tracts of Madras are British territory. That there is a certain amount of smuggling from these tracts into Orissa and the Bastar and Kalahandi States of the Central Provinces admits of no doubt. Whether this ganja is raised in the Agency Tracts or in the plains portion of the Ganjam, Vizagapatam, Godavari, and Kistna districts is perhaps doubtful. There is a considerable production of ganja in all these districts, and there is no evidence before the Commission that the production in the Agency Tracts themselves is large. But the Commission hope that, if control is introduced in the Madras Presidency generally, it will be possible to extend such control to the Agency Tracts. It is true that Mr. Willock, Collector of Vizagapatam, says: "Any interference in the Agency might be productive of political danger"; but he adds: "I am not sure that the extent to which the cultivation is carried on there is such as to render any serious discontent likely." And Mr. Taylor, for 4 years Manager of the Jeypore Estate, says: "There is no need for restriction. But neither, so far as I know, would any privation be caused if restriction were necessary in the interests of other provinces. There would certainly be no privation involved in the prohibition of export. And, so far as I know, there

would be no privation of a general character involved in the prohibition of the use of the drugs in Jeypore Estate above the ghâts which is in my charge. I think that the introduction of the Government system of licensing sale would meet with no opposition from the people in the estate generally. I would recommend the Government system being introduced experimentally by opening a shop in Jeypore. I think there would be a great difficulty in interfering with the present growth of hemp. It would require an expensive preventive agency." This witness believes that the use of the drug in Jeypore is very limited.

The Commission find it difficult to believe that there will be greater difficulty in dealing with the control of hemp drugs in the Madras Agency Tracts, which are British territory, than in the Tributary States of the Central Provinces, where complete control has been secured, or in those of Bengal, where various measures have from time to time been introduced, though not with complete success. And in all these cases they regard control of cultivation as the object to be aimed at, inasmuch as it is the only satisfactory method of controlling the production and distribution of the drug.

Punjab Native States.

735. As ganja is not produced or used in the Punjab, and charas is an imported article, which will be dealt with before it reaches any of the Natives States of that province, the control of bhang is the only question for consideration in connection with the latter ; and this is not a difficult one. For bhang is only cultivated in Bahawalpur, and its sale is controlled. In any further arrangements made in the Punjab for the control of the hemp drugs, the co-operation of the various States may be desirable, but at present there is no need to offer any suggestions. The sale of the drugs is conducted under licenses granted by the States. In the Nabha State it is said that ganja and charas are prohibited.

Madras Native States.

736. In the Natives States under the Madras Government the system is much the same as in the Presidency itself. The introduction of control into the latter will render similar control in the former desirable.

Bombay Native States.

737. The principles of administration in many of the Native States under the Bombay Government are similar to those in British territory; and the conditions as regards growth of the hemp plant and its cultivation are also similar. Sale of the drugs appears to be invariably controlled. Here also any advance in the administration of the hemp drugs in British territory must be accompanied by the co-operation of the States. The mode in which this can be done need not be detailed. It is understood that the Bombay Excise Act has been adopted by many of the States, and it is probable that there will be no difficulty in securing a further development of their system if this is undertaken in British territory.

Khairpur in Sind.

738. The remarks made in paragraph 735 regarding the Punjab States equally apply to the Khairpur State in Sind, where also bhang is grown.

Commission's recommendation in regard to Native States generally.

739. In the foregoing remarks on the excise administration in respect of hemp drugs which exists in the Native States, the Commission have endeavoured to indicate where further control is desirable in the interests of the British administration. They are not in a position to estimate in each case the requirements of the States themselves, or the difficulties which may exist in the way of introducing a more effective system of control. But they have no reason to think that the system which they have recommended for British provinces is not generally applicable to these States, and they would suggest for consideration whether, subject to any special exceptions for which good reason may be alleged, they should not be invited to co-operate with the British Government in adopting that system. It is probable that in these States, as in most of the British provinces, the subject has not received the attention which it deserves, and that they will have no objection to uniting with the British Government in an effort to introduce effective control into this branch of their administration.

CHAPTER XVIII.

SUMMARY.

Conclusions arrived at by the Commission.

740. The following are the conclusions arrived at by the Commission:—

I.—Total prohibition of the cultivation of the hemp plant for narcotics, and of the manufacture, sale, or use of the drugs derived from it, is neither necessary nor expedient in consideration of their ascertained effects, of the prevalence of the habit of using them, of the social and religious feeling on the subject, and of the possibility of its driving the consumers to have recourse to other stimulants or narcotics which may be more deleterious (Chapter XIV, paragraphs 553 to 585).

II.—The policy advocated is one of control and restriction, aimed at suppressing the excessive use and restraining the moderate use within due limits (Chapter XIV, paragraph 586).

III.—The means to be adopted for the attainment of these objects are:

(*a*) adequate taxation (Chapter XIV, paragraph 587);

(*b*) prohibiting cultivation, except under license, and centralizing cultivation (Chapter XVI, paragraphs 636 and 677);

(*c*) limiting the number of shops (Chapter XVI, paragraph 637);

(*d*) limiting the extent of legal possession (Chapter XVI, paragraphs 689 and 690).

IV.—The method adopted should be systematic and as far as possible uniform for the whole of British India, and it is advisable that this method should be suggested for adoption by certain of the Native States (Chapter XIV, paragraphs 588 and 590; Chapter XVI, paragraph 639; and Chapter XVII, paragraph 739).

V.—A Government monopoly of production and sale is not recommended for practical reasons, though there is no theoretical objection to it (Chapter XIV, paragraph 589).

VI.—For the purpose of adequately taxing consumption, the combination of a direct duty with the auction of the privilege of vend is ordinarily the best method (Chapter XVI, paragraphs 634 and 635).

VII. When sufficient provision has been made for restricting consumption of the drugs by the means above detailed, there should be as little interference as possible on the part of the Government with their distribution (Chapter XVI, paragraphs 638, 654, and 678).

VIII.—Import, export, and transport duties are undesirable as obscuring the real issue how far consumption needs to be checked by a rise in duty. But in regard to imports from Native States which have not assimilated their system to that in force in British territory, the levy of import duty may be necessary (Chapter XVI, paragraphs 657 and 679).

741. The above mentioned conclusions embody the general principles and procedure recommended by the Commission. With a view to bringing the systems in different parts of India into harmony with these conclusions and generally improving the administration, the Commission have made the following suggestions :—

Suggestions made by the Commission.

(*a*) That in Bengal Government warehouses for the storage of ganja should be constructed in Rajshahi (Chapter XVI, paragraph 643).

(*b*) That, subject to this addition, the Bengal system of ganja administration should be generally followed in the Central Provinces, Madras, Bombay, Berar, and possibly in Ajmere and Coorg (Chapter XVI, paragraphs 656, 671, 672, and 673).

(*c*) That in the Central Provinces all ganja should pay a direct duty, whether consumed in the province or exported ; that the rule under which ganja is supplied by wholesale to retail vendors at a fixed price should be abolished ; and that the number of wholesale licenses should be granted more freely and without charge (Chapter XVI, paragraphs 649, 654, and 655).

(*d*) That in the North-Western Provinces the cultivation and manufacture of ganja should be prohibited and the system of bonded warehouses introduced for its storage (Chapter XVI, paragraph 657).

(*e*) That in Madras and Bombay cultivation of the hemp plant should be prohibited except under license, and that the licensed cultivation should be restricted to limited areas ; also that a fixed duty should be imposed on ganja, such supervision of the manufacture and storage of the crop being maintained as is necessary to its imposition (Chapter XVI, paragraphs 662, 669, and 671).

(*f*) That similar measures should be introduced into Berar and possibly Ajmere and Coorg (Chapter XVI, paragraphs 672 and 673).

(*g*) That on all charas imported into the Punjab a duty of not less than Rs. 80 per maund be levied, the drug being stored in bonded warehouses, and duty paid when it is taken out by the vendors. Inter-provincial arrangements regarding the crediting of duty to different provinces to be made under the orders of the Supreme Government (Chapter XVI, paragraphs 674 and 675).

(*h*) That where possible a duty should be levied on bhang. Where refuse ganja is used as bhang, the rate may have to be fixed at a higher figure with reference to this fact (Chapter XVI, paragraph 677).

(*i*) That as a rule separate licenses should be granted for the sale of the different kinds of drugs (Chapter XVI, paragraph 680).

(*j*) That licenses for retail sale should not ordinarily be granted to wholesale dealers (Chapter XVI, paragraph 682).

(*k*) That a separate license should be granted for each shop (Chapter XVI, paragraph 683).

(*l*) That licenses for retail vend should contain a provision prohibiting the vendor from selling the drugs to children or insane persons (Chapter XVI, paragraph 684).

(*m*) That when new shops are proposed, municipal bodies, rural notables, zamindars, or headmen, as the case may be, should be consulted as to the necessity of opening them and as to their location, and that objections, if made, should receive the most careful attention (Chapter XVI, paragraph 688).

(*n*) That the limit of legal possession of the hemp drugs should be the same for the whole of British India, *viz.*—

Ganja and charas, or any preparation or admixture thereof, 5 tolas.

Bhang, or any preparation or admixture thereof, one quarter of a sér.

And that Native States should be invited to adopt this maximum (Chapter XVI, paragraph 690).

Suggestions regarding Burma.

742. As regards the province of Burma, that the sale of ganja to natives of India should be licensed under proper control and taxation where there is a demand for it among such persons, the prohibition of cultivation in Burma, as well as that of the use by the Burmans being maintained (Chapter XVI, paragraph 695).

W. MACKWORTH YOUNG ... *President.*

H. T. OMMANNEY ...
A. H. L. FRASER ...
C. J. H. WARDEN ...
SOSHI SIKHARESWAR ROY ...
HARNAM SINGH, AHLUWALIA...
NIHAL CHAND ... } *Members.*

6th August 1894.

Raja Soshi Sikhareswar Roy and Lala Nihal Chand sign the report subject to a note of dissent.

W. M. YOUNG.

Note of Dissent by Raja Soshi Sikhareswar Roy from opinions expressed in the Report.

It will be well, I believe, to mention here, before stating the principal points of difference with my colleagues, that I have thought it advisable to keep outside the sphere of my consideration the revenue question connected with the excise administration of the hemp drugs. The reasons for adopting this course are:—

(1) In the instructions to the Commission contained in Government of India Resolution No. 2792-Ex., dated 3rd July 1893, there is no mention of the revenue question.

(2) Looking to the past history of the use of intoxicating drugs in this country during the period of Hindu and Muhammadan rule, and also to the distinct principle laid down by the British Government while taking in hand the control of the use of these drugs, I have been led to think that I would not be justified in taking the question of revenue into my consideration while dealing with the advisability or otherwise of prohibiting the use of the drug.

A short sketch of the past history of the administrative control of intoxicating drugs in India will not be uninteresting if given here.

Manusmriti, or the Institute of Manu, is considered as the highest authority on the Hindu law. In Chapter VII of *Manu* are enumerated the different sources from which in ancient time the sovereigns of the country used to collect revenue from their subjects. No taxes on intoxicants are mentioned therein.

Neither in *Jagnabalka*, *Brihaspati*, *Atri Parasara*, or in any other standard work of *Smriti* is there to be found any thing which could show that the custom of imposing taxes on intoxicating articles existed. There is ample proof to show that in ancient India the use of intoxicants was not uncommon. Even in the *Vedas* not only the mention of the word *sura* (spirituous liquor) is found every now and then, but it also appears that the use of *soma* drink—that is, leaves of a kind of plant in the form of an infusion—was very common among the ancient *Rishis*. Whether the *soma* plant bears any resemblance or relationship to the hemp, as has been said by some witnesses (witness No. 69, Central Provinces, and others), or as stated in para. 15 of the report on the cultivation of ganja by Babu Hem Chunder Kerr, is a point on which there is great difference of opinion; but this much is certain that in ancient India there were other intoxicating drinks than wine.* But it was the manufacture and sale of spirituous liquors alone that were prohibited by law. "* * The distillers and sellers of spirituous liquors should be banished from the realm of a king, as they are secret thieves and harass the subjects by their ill deeds."—Chapter IX, *Slokes* 225 and 226 *Manusmriti*.

During the Muhammadan rule in India attempts were made from time to time to impose duty on certain intoxicating beverages, but it is not clear how far the use of intoxicating articles was actually brought under direct control of the governing power. It is not unknown to those who have studied Muhammadan history carefully that the sources of revenue as well as the collection of revenue during the Muhammadan rule reached their highest point under the sovereignty

* "*Sura panam* is also spoken of besides *soma-panam*—that is, dram-drinking as distinguished from wine drinking; and in the *Satapatha Brahmana*, a son of Tvashtri is represented as having three months, one of which was *soma-drinker*, an ther *Sura-drinker*, and a third the consumer of other things." Page 21, India: Past and Present, by Mr. Dutt.

of Aurangzeb. In Catrou's *Histoire générale de l'empire du Mogol*, a list is given of the different sources of revenue from different provinces which were under the sovereignty of Aurangzeb. Nothing is to be found in this work which shows that there was any duty imposed on the use of intoxicating articles. On the other hand, an interesting account of his aversion to the very idea of imposing taxes on intoxicating drugs will be found in a Persian book which contains a collection of his letters written by him to his friends and relations. Aurangzeb's grandson proposed to impose a tax on palm juice, a very mild intoxicating beverage which was then in great favour among certain classes of Hindus in Bengal. Aurangzeb's answer in reply to his grandson's proposal was as follows:—

"Though the taxation of the palm may lead to the collection of revenue, yet it is impossible for me to sanction it. I cannot understand what dishonest *mufti* declared it legal to do so. You must know that such ill advisers are enemies of this and the next world. You should thank Almighty who has put you in possession of three provinces which are so full in wealth, and which fill our coffers with so much revenue, and in which everything is so abundant and cheap. You should know as well that the good-will of the subjects is the only wealth for this world and the next." (Letter No. 90.)

Later on, during the closing period of Muhammadan rule, some sort of taxes were imposed on the trade of spirituous liquors in some parts of the country, and it appears that these were collected under the head of *sayer* revenue by the zamindars when the country came under the possession of the East India Company from the hands of the Muhammadan rulers.

In 1789 a cry was raised in some quarters against the conduct of the Bengal zamindars, and it was said that, owing to the want of proper control on the part of the zamindars, the vice of drunkenness was spreading very fast among the lower classes of the people, and it was suggested that the proper remedy of this evil would be for the Government to bring the collection of the duty on spirituous liquor under its direct control and management. Accordingly, on the 19th April 1790, by a general notification the Government decided upon the resumption of the *sayer* on spirituous liquor. This was followed by the Abkari Regulation of the 14th January 1791, the main provisions of which were as follows: "That a tax should be levied on every license granted both to distillers and vendors of spirituous liquors; that the rates of tax on the licenses should be regulated by the local situation of the stills and shops, the quantity of consumption, and selling price; * * * that all private unlicensed stills should be prohibited under penalties."

On the 16th February 1798 the Board of Revenue suggested that a duty be levied on the sale and consumption of (1) madak, (2) ganja, (3) subzi, (4) bhang, (5) majum, (6) banker, and (7) charas. On the 22nd March 1798, the President (the Governor-General in Council) replied as follows: "Some of the articles enumerated in your letter, we have reason to believe, are of so noxious a quality, and produce a species of intoxication so extremely violent, that they cannot be used without imminent danger to the individual as well as to the public who may be exposed to the effects of the temporary insanity frequently excited by the use of these drugs. We are of opinion that the vend of any drugs of this

description should be altogether prohibited, and we desire therefore that, after having made an inquiry with a view to ascertain more particularly the nature and effect of them, you will prepare and submit to us a regulation for this purpose, as well as for establishing such duties as may appear to you proper on the sale of such other drugs as may be used without the same pernicious effects."

The Board of Revenue made inquiries under the above order, and arrived at the conclusion that tobacco, opium, ganja, bhang or subzi, banker, and toddy are not for the most part represented as producing any very violent and dangerous effects of intoxication except when taken to excess, and that they appear to be useful either as medicine or otherwise. For these reasons the Board of Revenue thought it advisable to recommend that the sale of any of these articles should not be altogether prohibited, but that in order to restrict their use a tax should be imposed on them.

Accordingly unlicensed sale of ganja and other intoxicating drugs was prohibited, and a daily rate of duty on the sale of ganja and other intoxicating drugs according to their strength and quantities was imposed on them by Regulation VI of 1800. In 1853 the system of daily tax on intoxicating drugs was abolished, and in its place a duty at Re. 1 per ser on ganja and charas was imposed. In 1860 a fixed fee of Rs. 4 per maund was prescribed for each ganja license in addition to the above fixed duty. In 1876 the present system of annually selling by auction the retail licenses was introduced. On the 29th April 1875 the Government of India addressed a letter to the Government of Bengal, in which it observed that "nothing should be done to place temptation in the way of the people that can possibly be avoided." It was also stated: "His Honour the Lieutenant-Governor may rest assured of receiving the support of the Government of India in any measure that he may adopt for limiting the consumption of ganja; and indeed if the use of the drug could be altogether suppressed without the fear of leading to its contraband use, such a course would be justified by its deleterious effects."

In 1871 Sir Richard Temple, while he was Financial Member of the Government of India, drew the attention of the Government to a note, dated 15th July 1870, by Mr. Chapman, the Financial Secretary, in which he made an observation to the effect "that every lunatic asylum report was full of instances of insanity and crime due to the use of ganja." The result was that Local Governments were directed by the Government of India to make a thorough investigation in regard to the effects of the use or abuse of the several preparations of hemp. Mr. Hume, then Secretary to the Government of India, in his letter No. 339, dated 10th October 1871, wrote to all Local Governments and Administrations as follows: "It has frequently been alleged that the abuse of ganja produces insanity and other dangerous effects. The information available in support of these allegations is avowedly imperfect, and it does not appear that the attention of the officers in charge of lunatic asylums has been systematically directed to ascertain the extent to which the use of the drug produces insanity. But as it is desirable to make a complete and careful inquiry into the matter, the Governor-General in Council requests that, with the permission of His Honour the

Lieutenant-Governor, you will be so good as to cause such investigations as are feasible to be carried out in regard to the effects of the use or abuse of the several preparations of hemp. The inquiry should not be simply medical, but should include the alleged influence of ganja and bhang in exciting to violent crime."

The result of this investigation was embodied in a Resolution by the Government of India, dated 17th December 1873, and it was decided by the Government that the cultivation and consumption of ganja should be absolutely prohibited in British Burma, and that restrictions should be imposed on the cultivation, possession, and sale of ganja in the Central Provinces, the Chief Commissioner of which suggested the adoption of such a course on the ground that "the consumption of drugs has of late years materially increased in the Central Provinces, and fears have been expressed by district officers that since the introduction of the public central distillery system and the consequent rise in the price of spirits, many people who formerly drank spirits have taken to drugs as a substitute." The Local Governments of other provinces and presidencies were not in favour of altering existing arrangements, so the Government of India did not press them for the adoption of any restrictive measures of a stringent character, although in the concluding portion of the Resolution the wish of the Government to discourage the use of ganja was expressed in a general way in the following words: "His Excellency in Council, however, trusts that the various Local Governments and Administrations will endeavour, wherever it may be possible, to discourage the consumption of ganja and bhang by placing restrictions on their cultivation, preparation, and retail, and imposing on their use as high a rate of duty as can be levied without inducing illicit practices."

In July 1891, Mr. Mark Stewart, M.P., in the House of Commons, drew the attention of the Secretary of State for India to a statement which appeared in some Indian paper regarding the injurious effect of ganja, and requested him to call the attention of the Government of India to the desirability of extending the same prohibition as adopted for Burma to the other provinces of British India. The Right Honourable the Secretary of State for India accordingly, in his despatch dated 6th August 1892, requested from the Government of India an expression of its views on the effects of this drug, and asked if the Government of India would propose to take any further steps for restricting the consumption. The Government of India in reply wrote a letter to the Secretary of State on the 9th August 1892, in paragraph 3 of which it admitted the injurious effects of the drug in the following words: "We are inclined to believe that ganja is the most noxious of all intoxicants now commonly used in India. But, even if the absolute prohibition of the use of the drug could be enforced, the result might be to induce the use of still more noxious drugs. India abounds with plants, growing wild, from which drugs can be procured which are more deleterious in their effects than ganja..... But although we consider it impracticable to enforce the absolute prohibition of the use of ganja, we fully recognise it as our duty to restrict its consumption as far as practicable, and we have distinctly laid down the policy to be pursued in respect of this drug in our Resolution of the 17th December 1873 already quoted."

It will be seen from the above sketch that the use of intoxicating drugs was not uncommon in ancient India, but the restrictive measures adopted in those times differed from those now existing, inasmuch as the attempt then made to restrict the use of spirituous liquors was not by imposition of taxes as is done now, but by disallowing the sale and manufacture under some severe penalty. In the latter portion of the Muhammadan rule, however, some sort of duty was imposed on vend of spirituous liquors, but it did very little to check their spread. The history of the control of the use of the intoxicating drugs during the last century under the British rule will show most clearly that although the Government is trying its best to check their spread by adopting various restrictive measures from time to time, yet the result is not always satisfactory to the Government itself. It will also show that the Government is fully aware of the injurious effects caused by the use of these drugs, and that it is ready to prohibit their sale, manufacture, and importation if only it is fully convinced of the practicability of the measure. With this view, and to estimate aright the exact measure of the injury done to the people at large by the use of these deleterious drugs, Government caused inquiries to be instituted from time to time. But, failing to come to any satisfactory conclusion, the Government has been pleased to appoint the present Commission to institute further inquiries concerning the subject.

To obtain exact knowledge of the subject of their inquiry, the Commission directed their attention to the following five principal methods for eliciting information :—

(1) By examining witnesses from various provinces.

(2) By examination of cases attributed to hemp drugs in lunatic asylums.

(3) By causing scientific investigation to be made in regard to physiological action of hemp drugs, etc.

(4) By reading official records and current literature bearing on the subject.

(5) By personal observation of the habits and condition of the consumers of these drugs in various parts of India.

With regard to (1), all the members of the Commission as a body had opportunity of judging for themselves the value of the evidence taken before them. The inquiry (2) was conducted by a Sub-Committee consisting of two members of the Commission, while (3) scientific investigation was conducted not by any member of the Commission nor in their presence, but by a medical man at the request of the Commission.

As regards evidence of witnesses, it will be well to mention here the difficulties and disadvantages which the members have had to work under for the following reasons :—

(1) The subject of inquiry was not of such a nature as to induce men of educated classes or well-to-do people of native society to take any special interest in it, so I think it can be safely said that the bulk of our witnesses had very little practical knowledge or personal observation of their own regarding the subject-matter of our inquiry, and this fact is borne out in many instances by their own statements.

(2) The time available for answering the long series of questions framed by the Commission was in the majority of cases not sufficient for the witnesses to make a thorough study of the subject in all its bearings.

(3) For the reasons abovementioned, most of the witnesses have had to depend mainly on hearsay statements of other people—a fact which in many instances was admitted in their answers.

(4) The Commission tried to get information from the people who have special knowledge of the subject, but those people, having no knowledge of English, answered the questions from a translation sent to them which was not always very accurate, as will be seen from paragraph 105 of the report. The evidence thus obtained also got distorted in some cases by re-translation. This fact was elicited in some cases when they were orally examined, and of course the mistakes of the translation were at once corrected. But for those who were not orally examined it is difficult to say how far their papers are still open to correction, as they have not had any opportunity of reading their answers in print.

(5) The three drugs—ganja, charas, and bhang—having been grouped together in one and the same question, the witnesses in many cases made a confusion in their answers,—a fact which was brought to light at the time when some of them were orally examined.

(6) The evidence in all cases was not noted down in the exact words of the witnesses while orally examined, the substance of their statements having been recorded in the writer's own language. The fact also that the portion of the answers was not put side by side with the corresponding questions put to the witnesses goes to diminish the value of such evidence to some extent.

(7) In some cases the witnesses were prejudiced in answering the Commission's questions on account of their holding a wrong notion of the object of the Commission's present inquiry. This fact came to my knowledge from casual remarks of some of the witnesses as well as of other people in different places where opportunities were placed before them to express their free opinion. A remark which was made by one of the high officials of the Indore State at one of the sittings of the Commission there also shows that in many places people misunderstood the motive of the present inquiry.

(8) The other disadvantages under which the members had to work need not be mentioned here in detail, as they may be seen from the proceedings book of the Commission.

Although there are thus some disadvantages and difficulties above indicated, yet the evidence of so large a number of witnesses examined by the Commission cannot fail to throw some light which will assist in coming to a general conclusion.

It would not be difficult to quote from the evidence before us any amount of opinion either in favour of ganja to show that its use is not injurious, or against the use of ganja to prove that it is highly deleterious and most harmful; so, without attempting to quote individual opinions, I will be content with showing in a general way their views on the subject matter of our inquiry.

The following is an analysis of the opinion of witnesses on the question of injurious effects of the hemp drugs :—

Province.	GANJA.			CHARAS.		
	Deleterious.		Not deleterious.	Deleterious.		Not deleterious.
	Excessive.	Moderate.		Excessive.	Moderate.	
Bengal ...	107	83	13	63	50	9
Assam ...	14	21	2	10	17	2
North-Western Provinces and Oudh.	38	64	6	42	66	3
Central Provinces	33	28	3	17	13	2
Bombay ...	51	34	2	32	23	2
Madras ...	34	57	17	34	53	17
Punjab ...	...	...	...	...	...	...
Sind ...	...	...	...	...	...	...

A careful examination of the statements of witnesses will show that an overwhelming majority of the superior medical officers are of opinion that the hemp drugs are very deleterious in their effects (some even go so far as to say that they are so even when used moderately), and that their excessive use brings on insanity and other diseases. The large number of executive officers, while generally agreeing in the view that the use of these drugs is not so injurious in their effect as above described, have proposed at the same time that the duty at present levied on them should be raised. The consensus of opinion among most of the witnesses belonging to the orthodox Hindoo class is that the use of bhang is connected with the social and religious customs of the people, but it would be well to point out here that a very few of them consider such customs as absolutely essential. The opinion of some of the Muhammadan and European witnesses is that the use is essential. The enlightened portion of the native community who were invited to give evidence generally share in the view that these drugs are injurious, and that their use may be prohibited. The reason for this diversity of opinion is not far to seek. On the one hand, the patriots and philanthropists in their excessive zeal for the welfare of the people are generally apt to magnify the existing evils which corrode society, however small they may appear to the naked eye ; while, on the other hand, another class, with a view to serve the interests of the State, generally make the evils appear very much smaller, like things seen through the wrong end of the binocular glass, forgetting that the interest of the Government could be best served by serving the interest of the people.

About the examination of cases admitted to the lunatic asylums where the cause of insanity was attributed to hemp drugs, it may be said that the Commission's inquiry extended over a period of one year, namely, 1892, and the conclusion arrived at, however correct it may be for that year, cannot perhaps be

accepted as general. What leads me to form this opinion is that the nature of the evidence on which the Sub-Committee based its decision is in some instances of a very contradictory and unreliable nature. In this connection my suggestion would be that the statistics of such cases for the next succeeding three years may be taken, and the local officers be impressed with the necessity of taking down correct notes of the nature of insanity, its causes, &c., after thorough examination.

I think I need hardly say anything more on the physiological action of hemp drugs than by quoting the following from Dr. Cunningham's report, which proves that the investigation is not yet complete:—

"The results of this were as follows, in so far as mere casual naked-eye inspection goes; for I have already pointed out the detailed histological examination of the condition of the various organs and tissues is a matter not of a few hours, but of many weeks' work; so that it has been impossible for me to carry it out and at the same time to meet the wish of the Commission for the immediate submission of a report. Specimens of all the more important organs have, however, been carefully preserved, and will form the subjects of detailed histological examination hereafter."

The principal recommendation of the Commission is that, in order to restrict the use of these drugs, a high rate of duty should be imposed on them. Considering the peculiar condition of this country and its population, I do not think the doctrine of restricting the use of intoxicants by introducing a gradual increased rate of duty on their trade could be accepted as a very sound one. The past history of the excise administration of the country will show clearly that such measures, although adopted from time to time, were not of much avail. To prove this it would be necessary either to point to facts and figures in official reports or to quote public opinions. If it is possible to find accurate figures of area under cultivation or actual quantities of production of the intoxicating drugs for a series of years, the actual increase or decrease of the use of the drugs could be inferred from an examination and comparison of those figures. The following extract from a letter of the Government of Bengal to the Board of Revenue will show that the Government itself has very little confidence on the statistical tables prepared in the Excise Department:—

"The Lieutenant-Governor has had an opportunity of visiting Nowgong and of personally inspecting the Ganja Department at the place; and from inquiries made by him on the spot, it appears to him that the widest opportunities for fraud and smuggling exist, though no proof has ever been adduced of detected smuggling of ganja on an extensive scale. The cultivated area is never measured. The result therefore at the end is entirely speculative and uncertain."

The Acting Secretary to the Madras Board of Revenue in the Department of Separate Revenue in his letter No. 1839-Mis., dated 1st May 1894, says: "Accurate figures are nowhere available, as no accounts are maintained respecting the cultivation of the plant." Such is the case with every province. Nowhere accurate figures regarding the cultivation or production of ganja are available. However, if we are to depend on the reports of the Excise Department, it will be seen from an examination of these statistical tables that, notwithstanding a continuous raising of duties on ganja, its cultivation and trade are

markedly on the increase. The rates of fixed duty have been raised in Bengal from time to time. For the sake of convenience I will divide the twenty years from 1874 to 1893 into as many periods as the rates of duty on the drugs were increased and give an average of areas under cultivation, etc., for each period. In this manner their effect on the spread of cultivation and trade of the drug will be seen most clearly. In five years from 1872 to 1878 the rate of duty on "best "quality of ganja was Rs. 4, the area under cultivation 1,978 bighas, sale 7,800 maunds, import 830 maunds, and revenue Rs. 11,67,829. In the next four years from 1879 to 1882 the rate of duty on round ganja increased a little, the area under cultivation was 1,982 bighas, sale 5,657 maunds, import 879 maunds, and revenue Rs. 14,51,088. In the next five years from 1883 to 1887, rate of duty Rs. 5, area under cultivation 2,010 bighas, sale 5,861 maunds, import 1,416 maunds, and revenue Rs. 19,68,822. In the next three years ending 1890, rate of duty Rs. 7, area under cultivation 2,207 bighas, sale 6,354 maunds, import 1,713 maunds, and revenue Rs. 22,74,354. In the next three years from 1890 to 1893, rate of duty Rs. 8, area under cultivation 2,509 bighas, sale 5,741 maunds, import 1,571 maunds, and revenue Rs. 23,30,106. It will be seen from the last year's report that the area under cultivation was no less than 3,540 bighas in 1892-93.

I think it would be well to see what the statements of the witnesses prove regarding the spread of the use of hemp drugs. No. 1 Bengal witness, Mr. D. R. Lyall, Member of the Board of Revenue, in charge of Excise in Bengal, says in reply to Question No. 25: "The consumption of ganja varies little." Mr. E. Westmacott (Witness No. 2), late Commissioner of Excise in Bengal, says: "I doubt there being either increase or decrease. If smuggling were completely stopped, figures of consumption would undoubtedly go up." Mr. William Colebrook Taylor (36), Special Deputy Collector, Orissa, says: "The use of ganja is said to be on the increase. Cannot give reasons except that the existence of so many ganja shops must have a tendency to attract consumers and increase the consumption." Mr. A. C. Tute, Collector of Dinajpur, witness No. 12, says: "The use of ganja is on the increase. The reason for increase in consumption here is that the people of this district show a liking to ganja in preference to drink." Witness No. 166, Ray Radhagobind Roy Sahib, Zamindar of the same district, says: "The use of ganja is on the increase." Witness No. 92, Mr. W. R. Rickets, Manager of Nilgiri State, Orissa, says: "I should say the use of bhang and ganja is decidedly on the increase." Witness No. 80, Babu Hem Chunder Kerr, the Deputy Collector of Alipur, and the well-known author of the valuable report on ganja, says: "With increase of duty smuggling becomes more rife (*vide* my Report, page 153). The first improvement that I would suggest will be the reduction of the duty levied on ganja, which has been raised rather too high."

In the North-Western Provinces the increase in the use of hemp drugs is not less marked than in Bengal. Mr. Stoker, the Excise Commissioner of North-Western Provinces, in paragraph 42 of his memorandum says: "In the twenty years since 1873 the receipts have grown from Rs. 4,07,822 to Rs. 7,06,788, or over 73 per cent. In Oudh the increase has been over 193 per cent., and in the North-Western Provinces it has been 50 per cent." For this increase he has assigned three causes, one of which is "an increased use of hemp drugs."

In Punjab the Financial Commissioner's letter, dated 6th October 1891, contains the following: "So far as statistics are available, the revenue derived from

the Punjab from the hemp drugs has remained practically stationary for several years. * * * The probabilities are all in favour of increased consumption."

A careful examination of Excise reports and statements of witnesses in other provinces will show that the use of hemp drugs is spreading in the same way everywhere, and, wherever it will be found otherwise, the cause may be easily traced to the spread of the use of spirituous liquors. The question of the spread of the use of hemp drugs is so much intermixed with that of opium and spirituous liquors that it is not at all convenient for anybody to deal with the one kind of intoxicating article alone, keeping the others outside the sphere of consideration. The principle of restricting and controlling the spread of intoxicating articles by imposing high rates of duty has been applied to all, but notwithstanding this the use of every kind of intoxicant is on the increase. Attempt has been made from time to time to explain away this increase of intemperance as well as the revenue derived from the use of intoxicating articles in India by officials of the highest position and experience by bringing forth the argument that it is the result of the improvement in the condition of the people. Sir J. Strachey in page 30 of his admirable work, "Finances and Public Works of India," says: "This increase of 50 per cent. in the last twelve years is not to be attributed to the increase of intemperance, but to improvement in the condition of the people, and, still more, to better administration."

Sir Richard Temple in his "India in 1880" says: "The sight of this may give to some observers the impression that under British rule drinking prevails more than under Native rule. Wider observation will, however, prove that the Indians, if judged by the standard of advanced nations, are sober and temperate in the main, and that, despite any defects which may still lurk in the excise system, the British taxes do operate as some check upon insobriety."

Probably nowhere this line of reasoning was more clearly and effectively put before the public than in a Parliamentary Report on "Intemperance" prepared by a Select Committee of the House of Lords. It is stated in that paper: "This increase of expenditure cannot by itself be taken as a proof that drunkenness has increased in the same ratio. It is probable that a large portion represents the moderate consumption by the temperate. With increasing incomes the spending power of all classes has grown, and a higher scale of comfort has been gradually introduced. Just as the consumption of meat has increased, so has that of intoxicating liquors; but in neither of these cases does the increased general consumption necessarily imply a proportionate excess on the part of individuals. Further, it has been shown that the use of tea, sugar, wine, and tobacco has increased far more rapidly than the use of spirits or beer."

Whatever may be the cause of the increase, in this country at least it is believed by many the use of the intoxicating drugs is spreading very fast. An experienced officer of the executive line in Bengal, Mr. Dutt, Deputy Magistrate, in page 276 of his book "India: Past and Present" says: "The vice of drunkenness has been most alarmingly increasing in the country since the introduction of British rule in it. Of course the raising of the excise duties would necessitate the raising of the import duties on foreign liquor, as otherwise the result would be to displace Native liquor for European; and it is here that the shoe really pinches, for the Europeans in India, and possibly the higher classes of the Natives also, are apt to object

strenuously to any check being placed on the admission of European liquors into the country."

These few lines will show how keenly some of the educated natives of the country feel for the spread of the use of spirituous liquors and other intoxicating drugs among the people, and how necessary it is to find out some effective means which might arrest their further progress. The simple course of raising the rate of duty from time to time to check their spread has not proved of much avail up to this time. On the other hand, I believe the rates of duty on some of the intoxicating articles have already reached their highest point, and, instead of checking the spread of their use, do harm to society by fostering smuggling and crimes. In my humble opinion, adoption of an opposite course in the shape of gradual reduction of duties on some of the intoxicating articles, with a judicious arrangement for supplying the consumers of the drugs with the least injurious kind of intoxicants, may in a great extent help to fulfil the wish which the Government has at heart.

Sometimes judicious reduction of the duty on articles of consumption, such as drinks or beverages, has proved far more beneficial than the adoption of restrictive measure in the shape of imposing increased duty. To prove this, instances abound in the history of England as well as of other European countries. As an instance, I may mention here the case of tea. In the last century, when the use of tea spread in an astonishing way all over England, and when the traders in tea used to mix with it "great quantities of sloe leaves, liquorice leaves, leaves of other trees, shrubs, or plants, clay, logwood, and other ingredients," which were detrimental to the health of the people, Government with the help of legislation attempted several times to repress the *sophisticating of tea*, as these operations of the false tea-makers were termed. But such measures always proved quite ineffectual. A very stringent Act was passed in 1777 to repress this practice, but it also did very little good. At last, in 1784, a wise measure was adopted by Pitt, and a considerable reduction in the duty on the tea cheapened its price and repressed smuggling.

It would not be improper to see here how far the quite different line of method which the Government adopted to arrest the progress of hemp drugs in Burma has proved successful.

The following extracts will show that the prohibition of the sale and manufacture of ganja in Burma has proved of some benefit to the country :—

Mr. Bayne, Secretary to the Chief Commissioner, in his letter dated 2nd November 1893, says : "No one in Burma desires any change in the Excise law as far as intoxicating drugs are concerned." The Commissioner of the Tenasserim Division, in his letter dated 30th January 1894, addressed to the Financial Commissioner, says : "The effect of the prohibitory system has undoubtedly been to render it somewhat difficult and dangerous for any one to possess the drug, and this must have very largely tended to keep it out of the hands of Burmans. In my opinion, if this system had not been adopted, the result would have been disastrous. Burmans would very certainly have taken to use ganja, for which they have no desire, and, from their national character, those who took to it would have used it to excess, as is the case with opium, which taken in moderate doses does no

harm. Were the consumption and even possession of ganja not prohibited, the effects would be terrible." In his memorandum dated 1st June 1893, Mr. Culloden, Superintendent of Preventive Service, says: "Ganja has always been considered a prohibited drug in Burma. The prohibition of its importation has so far been successful that the drug has been kept out of the local market to a considerable extent; this is proved by the fact that, whenever traced to any one possessing it, only a very small quantity of the drug has been found on them." The Deputy Commissioner, Akyab, in paragraph 3 of his letter dated 1st December 1893, says: "The system of prohibition has on the whole been successful." The Deputy Commissioner of Toungoo, in his letter dated 12th January 1894, says: "In my opinion the system of prohibiting ganja in Burma has been to a very large extent, though not entirely, successful." The Commissioner of the Southern Division, in his letter dated 16th January 1894, says: "As far as my experience goes, the system of prohibition of ganja has worked well. This is based on my experience in different places." Major Eyre (Witness No. 12) in his evidence says: "The total prohibition now in force is absolutely necessary. Were the use of the drug to be sanctioned, the spread of the habit would be great and the results lamentable." Mr. Courneuve (Witness No. 14) says: "The absolute prohibition of the production and consumption of ganja has had the best results, and cannot be improved upon."

Consideration of all these leads me to come to a conclusion which is not quite in agreement with that of my colleagues. I believe that the injurious effects of the hemp drugs are greater and their use more harmful than one would naturally suppose to be the case after reading the concluding portion of Chapter XIII of our Report, although I think I should say that the facts elicited by our inquiry do not go to support the extreme opinion held by some well-intentioned people that these drugs in all their forms and in every case are highly pernicious in their effects. We have seen in almost all parts of India people connected with temples and *maths*, who are quite healthy, strong, and stout, who excessively indulge in bhang. Instances were not rare in which habitual ganja smokers were seen to be quite healthy and strong. It is among the very poor and the mendicant classes that shocking instances of human wrecks caused by over-indulgence in hemp drugs can be found. The general opinion that I have been able to form is that ganja and charas are no doubt injurious in their action on the constitution of certain people, especially those who are weak and underfed, even when they are taken in comparatively moderate doses, and only for a short time. When they are consumed in excess and continuously for a long time, their effects are undoubtedly most ruinous. It should be remembered that it is the men of the poorest class generally, who cannot afford to pay for the luxury of spirituous drinks, who take to the use of ganja. It is also a fact that men who are naturally weak, and who suffer from some sort of bodily or mental indisposition or discomfort, to obtain temporary relief generally indulge in ganja, at first in medicinal doses, and then gradually turn to be excessive consumers of the drug. This accounts for the fact why so large a number of the consumers of the drugs are often found to be in a most deplorable condition. On the whole, therefore, I am inclined to believe that the prohibition of the use of ganja and charas would be a source of benefit to the people.

The following chief difficulties are generally alleged in the way of total prohibition :—

(1) Probability of the consumers taking to the use of more deleterious drugs.

(2) Wild growth of hemp plant.

(3) Religious consideration.

It is said that the prohibition of the use of ganja and charas might lead the consumers to take to more deleterious and worse substitutes, such as dhatura, arsenic, etc. It should be noted that out of 1,193 witnesses, probably not more than twenty of the non-officials have shared this view. No doubt some of the consumers of ganja and charas will take to the use of spirituous liquor and some may go to opium, but at the same time it is reasonable to believe that a large number of them will not go to either. The reason is that fakirs and bairagis, who are the largest consumers of the hemp drugs, cannot on religious grounds resort to spirituous drink. It is stated by many witnesses that opium is distasteful to the consumers of ganja. Even supposing some of them go to *toddy*, *pachai*, weak country spirits, or even moderate doses of opium, the proofs are wanting to show that these forms of intoxicants are worse in their effects than ganja and charas smoking. Besides, if one of the forms of the hemp drugs—bhang,—which is considered least injurious, is left untouched by the prohibitory measure of the Government, consumers of ganja or charas will get in it a substitute, though weak in intoxicating strength. So I do not think there is much ground for the fear entertained by some that the stronger poisons, such as dhatura, arsenic, etc., might be substituted for any of these drugs.

It will be seen from the map showing the spontaneous growth of the hemp plant appended to the Report that such growth is only confined to the Himalayas, and portions of the plains adjoining it. In Southern India occasional growth of the plants may be found here and there, but not even to the same extent as they can be found in Burma. If notwithstanding this the system of prohibition was thought feasible in Burma, there seems hardly to be any reason for not extending the same at least to Southern India.

In Chapter II (on Natural History of the Hemp Plant) of the Report it is stated :

"The evidence of botanists, therefore, may be taken to exclude India from the area of indigenous growth, and it will be seen that the direct enquiries of the Commission tend to confirm this view."

In the memorandum of the Bengal Excise Commissioner, paragraph 6, it is stated : "The wild hemp plant is found in nearly every district, and it grows abundantly in several places. No ganja or charas is made from the wild plant, as the narcotic element which is essential to the production of either drug is entirely absent or very imperfectly developed in the uncultivated plant." The Excise Commissioner of the Central Provinces, in paragraph 57 of his memorandum, says : "It is believed that the hemp plant does not grow wild in any part of those provinces."

The Excise Commissioner of Assam in his evidence in reply to our question No. 7 says: "I think there is no such thing as wild ganja. It does not grow of itself like other weeds." Statements of this nature abound in excise memoranda and other records.

Further, in paragraph 665 of Chapter XVI of the Report it is stated: "That the ganja derived from such spontaneous growth, untended and unimproved, is so inferior as to obviate all likelihood of its competing with the cultivated ganja."

The fact, therefore, that the plants are found only in certain parts of the country and not all over it shows that the objection on this score is not very tenable, and that there is hardly any likelihood of the flowering tops produced by the uncared for hemp plants being ever substituted for cultivated ganja. As regards charas, it being imported from foreign country, the spontaneous growth of hemp plant does not affect the question of its prohibition.

In Chapter IX of the Report it has been proved that charas has no connection whatever with any religious observances of any sect of people in India. It would also appear that the use of ganja in this connection is not so widespread as that of bhang. A careful examination of the statements of witnesses will show that the use is confined to a very small circle of people, and even that use cannot be considered as essential, as it is not sanctioned by any religious authority.

A very few witnesses, and these mainly from Bengal, mention that the smoking of ganja is connected with religious customs of the people. The majority of these refer to a mode of worship called Trinath Mela, which is in vogue in the Eastern part of Bengal and in some portion of Assam adjoining East Bengal. It would not be out of place here to state in brief the origin of this form of worship, and how far the use of ganja is really connected with it, and the connection of Trinath itself with the Hindu Trinity.

Major Moore in his "Hindu Pantheon," says: "In mythology *Brahma* is the creator, *Vishnu* the preserver, and *Siva* the destroyer; in metaphysics the first is matter, the second spirit, and the third time; and in natural philosophy, earth, water, and fire respectively." Perhaps it was with the object of bringing about a sort of reconciliation as it were among the different sects of Hindus who worship their god in these three different principles that one Babu Annada Chandra, a Varendro Brahmin of Dacca District, probably following the examples of Ram Sing of the Punjab or Ghasi Das of the Central Provinces, first started this new mode of worship in 1869 somewhere near his native village, this deity being termed "Trinath," or three in one. To popularize this mode of worship among the rural population, he himself composed a few stanzas of song in colloquial Bengali, which are sung instead of the usual citation of Sanskrit *Muntras*, while the worshippers of Trinath join together in performing the *Puja*. In these songs there is to be found only the mention of the word siddhi, *i.e.*, bhang and not ganja. The originator of this mode of worship, himself being addicted to the use of ganja, it was natural that his followers would follow his example and offer ganja to their god while worshipping him. That the use of ganja is not essential in this mode of worship can be ascertained from the fact that the ladies of the family are allowed to join with the male members in the worship, and it is known to every

body that women in Bengal as well as in other parts of the country, with the exception of those who publicly lead a disreputable life, never indulge in ganja or charas smoking.

Bengal witness No. 63, Babu Abhilas Chandra Mukharji, in his detailed note on *Trinatha Puja*, writes: "Ganja can be consumed by all in the name of a god, and the practice cannot be looked down upon, because it is done under certain forms and religious ceremonies." He concludes his paper saying: "The worship is on the decline. It is almost dying out among the educated *bhadrolokes*; but among the masses it still exists." So from these it appears that ganja or bhang is offered to *Trinath*, but its consumption is not essentially a part of the religious ceremonies to be observed in connection with this mode of worship.

It is to be greatly regretted that the class of men, such as *pandits, mohunts, gossains, gurus*, and priests, on whose statements reliance could be placed in matters connected with Hindu religion, and whose opinions could be accepted as authoritative, are almost totally wanting in the lists of gentlemen who have been asked to answer our questions. Out of 264 witnesses in the North-Western Provinces, only one *mohunt* is to be found, and that witness (No. 242, North-Western Provinces, Mohunt Kishoram Rai) says in answer to our inquiry if the use of ganja is considered essential in religious observances of Hindus: "There is no religious injunction to take the drugs. The rule has been invented by the consumers. The drugs are taken in connection with the worship of Mahadeo with the idea of becoming naked like the god, and regardless of earthly things."

Witness No. 239, Lala Balmukand, Governor, Arya Samaj, says: "No customs, social or religious, sanction the use of ganja and charas. Bhang is regarded as the favourite drink of Siva (deity), and is used on the occasions of the festivals over which he presides, *e.g.*, Shivratri, the anniversary of Siva's marriage; but the use of the drugs is not regarded as essential. It is generally temperate. It is not likely to lead to the formation of the habit, nor is otherwise injurious."

Witness No. 240, Priest Kashi Prosad Panda, of Mirzapur, says: "There is no religious view to support the use of these:"

In the Madras Presidency, out of 193 there are only 3 witnesses who either belong to the priest class or are connected with the management of Hindu temples. Witness No. 191, Samdasu Bavaji, priest of the Mutt of Sri Jagannadha Swamy, says: "The use of ganja is not considered as an essential to social or religious customs as some say." No. 192, Baldev Das, priest of Hanuman Mutt, says: "Some think it necessary for religious thoughts. Those who consume it for religious purposes use it moderately." Then, in answer to our question No. 34, he says: "It would be well to stop it, though it would be somewhat difficult to the habitual consumers." Witness No. 127, Raja of Ramnad, the head of Rameswar temple, one of the four great temples of India, says: "I am not aware of any custom, social or religious, with which the consumption of the drug is associated."

In the Bombay Presidency the only witness, Sewak Lall Sarsondas (No. 109), who is connected with a religious institution called "Arya Samaj," says: "The Arya Samaj fully sympathises with the objects of the Commission referred to, as

the principles and tenets of the Samaj enjoin on its members total abstinence from all kinds of intoxicating drugs."

In the Punjab two religious associations only have favoured us with their opinions. The "Sanatan Dharma Sava," of orthodox Hindus, says: "The beverage of bhang is sacred to the Siva, and in certain forms of worship is considered indispensable by certain classes of the votaries of Siva." "Arya Samaj," of Dera Ismail Khan, sent us copies of their resolutions, which are as follows: "That, in the opinion of this Samaj, the system in force in the Punjab regarding the preparation and sale of ganja and other hemp drugs is most defective, inasmuch as it affords facility for their consumption which deteriorates mental capacities and the health of the consumers;" (2) "that this Samaj is of opinion that the sale of the hemp drugs should be restricted to the medical profession for medical purposes, and the preparation be so restricted as to meet the said wants only."

In Bengal, Assam, Sind, and the Central Provinces there are none among the witnesses who belong to the Hindu priest or mohunt class.

The total number of witnesses who simply state that the use of ganja is connected with the religious customs of the people are in Bengal 96, Assam 9, North-Western Provinces and Oudh 74, Punjab 27, Central Provinces 28, Madras 36, Bombay 38, Sind 12, and Burma 2. Those who consider the observance of these customs essential are 55 in Bengal, 10 in Assam, 23 in North-Western Provinces and Oudh, 9 in Punjab, 11 in the Central Provinces, 13 in Madras, 6 in Bombay, 2 in Sind, and 1 in Burma; while the number of witnesses who state that there are no such customs prevalent are 55 in Bengal, 8 in Assam, 114 in the North-Western Provinces and Oudh, 25 in the Punjab, 24 in the Central Provinces, 78 in Madras, 30 in Bombay, 15 in Sind, and 8 in Burma.

It has been alleged that the use of ganja among religious mendicants who are constantly exposed to sun and rain has beneficial effects. The objects with which it is used by these classes of people are mainly twofold—(1) to produce intoxication, and (2) to generate heat. Apart from its intoxicating effects, if the generation of the heat in the system be one of the objects which the consumers have in view, I think it would not be altogether out of place to mention here that the abolition of the drug is not likely to cause them any hardship, as in that case its place can be supplied by an innocent root called Durba (*Cynodon dactylon*), which is very common, and which grows throughout India. This root, if smoked in a chillum, has the wonderful effect of generating heat in the system, while at the same time the unpleasantness caused by the intoxicating power of the latter can be avoided.

Charas is very deleterious, and the use of this form of the drug is highly in disrepute. It has no connection whatever with religious and social customs of the people; and, as it is imported from foreign country, it is quite feasible to prohibit its importation. I therefore recommend the prohibition of its manufacture, importation, and sale. With a view to save the persons connected with the manufacture and trade of charas from suffering any pecuniary loss, and the

habitual consumers of charas from the inconvenience of sudden deprivation of the use of the drug, it would be advisable to give sufficient notice and allow a time before the adoption of prohibitory measures.'

Although I am fully convinced of the injurious effects of ganja and the benefit which will be derived by its total prohibition, I think I would not be justified in advocating a sudden prohibition, having regard to the dissatisfaction which it may likely cause to a class of people known as *sanyasis*, *bairagis*, and *fakirs*, whose facilities for giving trouble are very great owing to their peculiar position and habits of life. I do not think, however, that this dissatisfaction of certain classes of people on account of the prohibitory measure in itself is likely to cause any serious annoyance to Government, but this, when added to other similar causes of dissatisfaction, might bring about discontent. It is scarcely necessary to point out the nature of the influence which these *sanyasis** and fakirs still exercise over a vast number of people who have not received English education.

There are other grounds besides the one mentioned above which lead me to recommend a gradual prohibition. If, instead of adopting a sudden prohibitory measure, the Government adopt a gradual one, it will get time to institute further inquiries, should it be considered advisable, with a view to ascertain the exact physiological action of ganja. If it be found possible to refine the drug† and make it less injurious by diminishing its narcotic effect, the question would then arise whether, like opium, it would not be advisable to make a Government monopoly of the drug. If, however, on moral or other grounds this course does not commend itself to Government, it would be a question for further consideration whether the cultivation and manufacture of ganja might not be concentrated at one place under direct Government supervision. In the latter case the disadvantages of the monopoly system may be avoided, while at the same time the advantage, namely, the control of the strength of the drug, might be obtained, and the smuggling of the drug may be minimised. At present we have not sufficient means to ascertain how far the injury caused to the consumers of the drug is due to the pure drug itself, and how far to the other poisonous substances that are occasionally mixed with it. This difficulty would be removed if the entire cultivation and manufacture of the drug are brought under Government supervision. Another great advantage to be derived by the adoption of this course is, if after further consideration and investigation, as suggested above, the Government decides for total prohibition, that nothing would be more easy than to give effect to such a measure. I would therefore recommend that, as a preliminary step towards prohibition, the cultivation of ganja may be concentrated in one place, and its manufacture and sale be brought under direct Government supervision.

* "Groups of these wanderers are frequently to be seen all over the country, lodging under large trees, the shady boughs of which serve as a canopy, under which they eat, drink, and sleep contentedly, a small raised hollow made of dried clay holding the fire which boils their culinary ingredients. At night they lie down for the most part on the bare ground or on little mats, with nothing softer than the roots of trees for their pillows. In this way they stroll, not only over all India, but even over parts of Central Asia, and some are known to have rambled on so far as Astrakhan and St. Petersburgh. They do not mind their privations while the liberty of their life they enjoy, and with some those distant journeys are not altogether aimless, as they carry many valuable things in their girdles in which they traffic. Begging is, of course, unavoidable to such a life, but the sanyasis eschew it as much as they can. Among them are to be found some very clever men."—Page 90, India : Past and Present, by Dutt.

† "If, instead of seeking to stop its entry into the country, we were to direct our attention to its refinement and purification, a vast amount of good would ensue.—*(The British Medical Journal, dated September 23rd, 1893.)*

I would further suggest for the consideration of the Government the following:—

Although in the opinion of scientific men ganja does not lose its narcotic value in lapse of time, yet the popular belief among consumers throughout India is that the drug loses its strength in time. I, however, believe it is quite possible that by exposure to air for a long time the ganja may lose its narcotic strength by a slow oxidation process. I would therefore suggest that ganja may not be allowed to be sold till after the expiry of one year from the date the crop is harvested, thus enabling the people to use it in this less injurious form.

It has come to our knowledge that some parts of the country grow stronger ganja than others. The physiological investigation concerning the various kinds of ganja grown in this country cannot be said to be complete. I would therefore suggest that, if it be actually found after due investigation that the drugs have different narcotic values in different parts of India, the cultivation and manufacture of the stronger form should be discouraged and its sale altogether prohibited, the weaker ganja only being allowed to find its way to the market.

It has been elicited in our inquiry that in some parts of the country women sell these drugs. The vend of these drugs, especially through women, lends an additional inducement to the buyers to indulge in these drugs. It would be well if measures are adopted to put a stop to these practices.

In paragraph 648, Chapter XVI, of the Report it has been recommended that the licensees of retail vend should not sell these drugs to children and insane persons. It would be better in case of children to fix an age limit, say 16, and to further restrict the sale to persons who, being under the influence of ganja or some other intoxicant, have no self-control at the time. It should further be stipulated in the license that no vendor shall adulterate his drugs with dhatura seed and other poisonous stuff. A heavy penalty should be imposed for infringement of the above rules besides forfeiture of the license.

The practice of consuming the drug in the shops should be discontinued, as in some cases it gives great facilities to consumers who on account of the joint family system, out of respect to their elders, cannot dare to take it in family dwellings houses. The practice of smoking in the shops also leads to the excessive use of the drug.

In England, although heavy duties are levied on all kinds of intoxicating articles, including tobacco, and the arrangements of excise administration and control of the use of intoxicating drugs are more complete than in any other country, still the legislature of that country very wisely kept aloof from touching the preparation and use of the weakest kind of drink—beer—for home consumption. No duties are levied there on private brewers occupying small houses not exceeding £8 annual value, and who are brewing only for domestic use*. Though this arrangement causes loss of Government revenue to a large extent, yet, on the other hand, it, supplying the people with a less injurious kind of beverage, keeps them to some extent from the attraction of strong spirituous drink. In the same manner the Government of this country can help the cause of temperance by losing a little of its hold on a glass of sap from a palm tree belong-

* 49 and 50 Vict., Chapter 18, section 3.

ing to a poor cultivator or a handful of leaves from a bhang plant growing spontaneously adjoining his homestead. It is greatly to be regretted that my colleagues should have thought it advisable to recommend the imposition of increased duty on bhang and the adoption of a system which would not only practically deprive the poor rural population of some parts of the country of the use of bhang leaves as a cooling beverage during the hot months of the year and as a domestic medicine for men and cattle, but would also drive them to some extent to the ganja shop to satisfy their craving for stimulant, as has been already the case in the Central Provinces. In former times bhang leaves were procurable in almost all the districts of the Central Provinces, but now, probably owing to the good administration of the Excise Department of those provinces, it is a rare thing there, and more than one witness in the Central Provinces states that the people use ganja in the form of a drink because they cannot get bhang. The matter has come to this pass not only in the Central Provinces, but also in many parts of Southern India. Many experienced native gentlemen as well as Government officials are of opinion that it would be well to leave bhang alone. Bengal witness No. 25, Mr. N. K. Bose, the District Magistrate and Collector of Noakhali, says :—

"The taxation in case of bhang seems quite unnecessary."

Quotations to the above effect could be given from the statements of the witnesses, but I do not think they are needed.

It has been shown already that bhang is probably the least injurious of all the intoxicants commonly used in this country. It is to a great extent connected with the social and religious customs of the people. Its use as a cooling drink in the hot months is very common in the central and north-west parts of India. As a domestic medicine for men and cattle, it is much in use among the rural population. The bhang plant growing wild can be found in almost all parts of Northern India. In my opinion it would not be a very easy task to bring the sale and manufacture of bhang under full control of the Excise Department of the Government without much annoyance to the people. I for these reasons recommend that bhang may be left alone for the present.

18th August 1894. SOSHI SIKHARESWAR ROY.

Note of Dissent by Lala Nihal Chand.

I joined the Commission in Calcutta on the 3rd August 1893, and after remaining for about a month in Bengal went with the other members to the North-Western Provinces, Central Provinces and Bombay Presidency.

On the 20th September while at Poona I fell ill and was forced to seek relief at home. This deprived me of a visit to the Madras Presidency. I rejoined the Commission on the 30th October 1893 in the Central Provinces at Nagpore, when witnesses were orally examined, but on the 18th November was again obliged to fall back and remained at home till the 17th April, when I joined at Lahore in the Punjab and remained with the Commission till the last sitting of the 6th August 1894. Thus I was with the Commission for 181 days out of 369 days that the Commission lasted.

The gap in my attendance would have proved more or less serious had it not been for the fulness with which all the affairs that transpired in my absence were recorded. The written answers of each witness and his statement at the oral examination, if there was any, as well as all the Provincial reports, memoranda and statistics, were printed and supplied to each member from time to time, and a careful study of them gave me a pretty complete knowledge of the whole subject.

2. On the 26th April 1894 the majority of the members expressed themselves that they were inclined to the view that the total prohibition of the hemp drugs was inexpedient, and on the 12th May this view was finally confirmed by them. Raja Soshi Sikhareshwar Roy was not present on these occasions, and I reserved my final opinion, as the notes on facts and figures which the members had to prepare in pursuance of the President's note dated the 25th April 1894 were not at that time ready and discussed by the Commission, and I thought it premature to express any conclusive opinion without duly weighing the arguments which each member had to advance both in favour and against these drugs.

3. It is with the deepest regret that I find myself compelled to dissent from my worthy colleagues; but thoroughly convinced of the justice of the views that I have been led to entertain, by a careful study of the literature on the subject, as well as by discussions with other members, I feel it a duty to lay them before my august Government for its due consideration. I must also note here by way of an apology for the incompleteness with which the points touched in the present note have been dealt, the great disadvantage under which I labour in having to express myself in a foreign language, a command over which I cannot profess to have, nor can I pretend to have the experience and skill required in drawing up an official report. I cannot therefore do more than give a bare statement of the facts and to support them with the statistics that have been collected by the Commission and which I believe fully bear them out.

I also wish to state that I concur with the other members for the most part as far as *bhang* is concerned, *excepting its taxation,* and I take exception to their views chiefly in connection with ganja and charas. I think that in considering the different products of the hemp, it would have been better if a broad distinction were kept up all through; and in summarising the results in some places, it would perhaps have been better not to dispose them off with the general terms like the *hemp drugs.*

4. The points where I materially differ from my colleagues are—

(1) Taxation of bhang.

(2) Production of ganja from wild plant.

(3) Dose and number of consumers.

(4) Proportion of excessive to moderate consumers.

(5) Extent of use.

(6) Public opinion, social and religious, about their use.

(7) Social and religious customs bearing on these drugs.

(8) Effects—

- (*a*) Physical.
- (*b*) Mental.
- (*c*) Moral.

(9) Hemp drugs compared with alcohol.

(10) Evidence from Native States and army.

(11) Prohibition—

- (*a*) Precedents of other countries.
- (*b*) Desirability and feasibility of prohibition.
- (*c*) Political danger.
- (*d*) Danger of using more deleterious drugs.

(12) Some of the conclusions arrived at by the Commission—

- (*a*) Policy of control and restriction.
- (*b*) Method of taxation.
- (*c*) Introduction of Bengal system into other provinces.
- (*d*) Abolition of the fixed price at which wholesale vendors in the Central Provinces are bound to sell ganja to the retail vendors and grant of wholesale licenses more freely and without charge in the Central Provinces.
- (*e*) Gradual taxation of charas.
- (*f*) Proposal for opening new shops.
- (*g*) Sale of ganja in Burma.

Taxation of bhang.

5. As stated in paragraph 564 of the Report, it is proved by a large majority of witnesses that bhang is less injurious than any other intoxicant used in this country, and does not seem to be so deleterious as to justify the Government to take an action with the view of prohibiting or restricting its use. Bhang is produced from hemp plant, wild and cultivated, which spontaneously grows in Northern India all along the Himalaya hills, on the sides of the Eastern and Western Ghâts and in some other parts of the country. Therefore it is practically impossible to control its growth and consumption.

It is used as a cooling beverage by the people at large, mixed with some ingredients which modify its evil effects if any, and its use is associated by certain sects of people with their religious and social observances. Moreover, it is used as a domestic medicine for men and cattle by the rural population. Taking all these points into consideration I am led to recommend that

bhang should be left alone and made free from all taxations. A few quotations are given in justification of these remarks:

(1) The North-Western Provinces Excise Report for 1883, paragraph 86: (The Honorable) "Mr. Cadell dwells on the necessity for dissociating the injurious ganja and charas from the less hurtful bhang. The former drugs appear to occupy, with reference to the latter, a position somewhat similar to that of chandu to opium, and it appears desirable that the more injurious drug should be rendered less accessible than the more innocent one."

(2) North-Western Provinces witness No. 1, the Honorable A. Cadell, Member, Board of Revenue, *oral*:—"As I said ten years ago, bhang is practically harmless."

(3) Bengal witness No. 25, N. K. Bose, Magistrate and Collector of Noakhali:—"The taxation on bhang seems quite unnecessary."

(4) Punjab witness No. 77, Lalla Ganesh Dass, President of the Sarin Sabha, Hoshiarpur:—"Bhang is less injurious and is often religiously used at Gurudwaras, and is also used by zamindars in the treatment of cattle. As it grows wild, the subordinate Government officials will have many chances of harassing the subjects if prohibition is enforced and therefore bhang should not be prohibited."

(5) The Honorable D. R. Lyall, Member, Board of Revenue, Calcutta:—"I never heard of bhang being blamed for insanity."

(6) Bengal witness No. 88, Mr. F. H. Tucker, District Superintendent of Police, Dinajpur:—"Bhang ought to be allowed freely."

(7) Bengal witness No. 89, Mr. R. L. Ward, District Superintendent of Police, Rajshahi:—"I would not tax bhang."

(8) Punjab witness No. 4, Lieutenant-Colonel J. B. Hutchinson, Officiating Commissioner, Rawalpindi:—"I ought to add that to make bhang more expensive or to prohibit it has this additional danger, that people might take to other things that are worse, and so far as I know there is no need for the restriction of bhang."

(9) North-Western Provinces witness No. 8, Mr. H. Fraser, Collector of Bijnour, *oral*:—"I think it is quite unnecessary to check the use of bhang. I have never known it do any harm."

(10) North-Western Provinces, Mr. T. Stoker, Excise Commissioner, says in his memorandum, paragraph 44:—"If it be admitted that so long as human nature remains unchanged some form of stimulants will be used, it follows that any measures to restrict drugs will be only half successful unless they are accompanied by measures which will render less harmful stimulants more accessible."

(11) Central Provinces witness No. 14, Rughanath Rao, Extra-Assistant Commissioner, Damoh, *oral*:—"Good bhang I have already said should be made more available. It would reduce the use of *ganja* as bhang, and also the use of spirituous liquor among the higher classes. Ordinary ganja used as bhang is more injurious than good bhang. The higher classes would also smoke ganja less. They would also take liquor less. All this would, in my opinion, be a change for the better."

6. Paragraphs 228 and 236 of the Report contain:—"It appears then that a very inferior but smokable ganja may occasionally be obtained from the

Production of ganja from wild plant.

spontaneous growth. The great majority of witnesses nevertheless state that ganja is not procured from the wild plants; and undoubtedly what is ordinarily accepted as ganja cannot be so obtained." "Mr. Wall, a late Commissioner of Excise (North-Western Provinces and Oudh), does not believe that ganja is produced by wild plants; and that many other witnesses take the same view."

The above extracts fairly establish that ganja cannot be produced from the wild plant. The following quotations further support the same view and conclusively prove that no kind of ganja either superior or inferior can be made from it.

(1) Bengal.—The Excise Commissioner, in his memorandum, paragraph 6, says :—"No ganja or charas is made from the wild plants as the narcotic element, which is very essential to the preparation of either drug, is entirely absent or very imperfectly developed in the uncultivated plants."

(2) Dr. Prain, in his report on the cultivation of ganja, chapter VI, page 11, says :—"Ganja is obtained from cultivated plants only, and of the female sex exclusively, the males being not only not used, but not permitted to grow in the vicinity of the crops in order that the formation of seeds may be as far as possible prevented."

(3) Memorandum by Brigade-Surgeon-Lieutenant-Colonel J. King, M. B., Director of Botanical Survey of India, dated 28th October 1893 :—"The plant familiarly known as Indian hemp (*Cannabis sativa*, L.) is really wild in no part of British India. But in all parts of India, and also in Upper Burma, plants of it may be found growing without cultivation near villages and gardens, where hemp is at present, or has in former times been, cultivated. In botanical phraseology, hemp is found in India, not as an indigenous plant, but as an escape from cultivation."

(4) Bengal witness No. 17, K. G. Gupta, Excise Commissioner, says; "No ganja is made from the wild hemp plant."

(5) Bengal witness No. 80, Babu Hem Chunder Kerr, retired Deputy Collector, and the officer deputed to make special enquiries about ganja in 1877, says : "The wild plants do not yield ganja."

(6) Bengal witness No. 6, A. L. Johnson, Commissioner, Dacca: *oral*:— "The wild plant is not used for ganja, but the leaf is used for bhang," and that "I know no case of ganja prepared from the wild plant without cultivation."

(7) Bengal witness No. 3, W. H. Grimley, Commissioner of Chota Nagpur :—"The plant in its wild state does not produce ganja. Bhang can be prepared from the wild plant, wherever grown, but I am doubtful about ganja, and that ganja consists of the resinous coated flowering-tops of the cultivated unfertilised female plant. The plant in its wild state does not produce ganja."

(8) Assam witness No. 2, J. J. S. Driberg, Commissioner of Excise, Shillong, *oral*:—"I think there is no such thing as wild ganja. It does not grow of itself like other weeds."

(9) Assam witness No. 9, G. A. Gait, Director of Land Records and Agriculture :—"I have never found the spontaneous growth of hemp in the jungle, only in places formerly cultivated or still under cultivation. The jungle grass appears to choke it even when it grows."

(10) Assam witness No. 13, Ishan Chander Patranavis, Extra-Assistant Commissioner of Sylhet :—"Hemp plants are not cultivated in this district. In

some places a species of plants grows spontaneously, which is called bhang, and which never produces ganja."

(11) North-Western Provinces and Oudh witness No. 8, Hugh Fraser, Magistrate and Collector, Bijnour :—" Bhang can be prepared from the hemp plant wherever grown and by any person ; ganja and charas cannot."

(12) North-Western Provinces and Oudh witness No. 63, Birg Nath Sahai, Excise Naib-Tahsildar, Gorakhpur :—" Ganja and charas cannot be made from the wild plant."

(13) North-Western Provinces and Oudh witness No. 254, Lala Sheopershad Rai Bahadur, *oral* :—" Ganja and charas cannot be made from the wild plants. The sample shown to me is ganja, and has been grown from ganja seed. It could not have been got from the wild plants."

(14) Punjab witness No. 63, Sirdar Bahadur Bhugwan Singh, zamindar, Amballa District :—" Ganja is not raised from the wild hemp seed, for it is another class of product."

(15) Bengal witness No. 64, Gobindra Chundra Das, Deputy Magistrate and Deputy Collector of Malda :—" There is one point to which I wish to lay particular stress in this connection. The cultivation of ganja has been confined to the Rajshahi tracts for nearly half a century ; previous to that even there is no evidence to show that ganja used to be ever grown on a large scale in any other part of Bengal. It follows therefore that the cultivators of Bengal, even if they had ever cultivated ganja, have long forgotten the method of its cultivation, and would be unable to cultivate it now even if they be willing to do so. Further, it has been by no means established that the climate and soil of other parts of Bengal would be at all suitable to the growth of the ganja-bearing plant. An experiment to cultivate the ganja at Sibpur under the scientific supervision of the Director of Land Records has by no means proved a success. * * * " It is also known that the presence of a single male plant is sufficient to destroy the whole crop of a field. Ganja experts would be necessary to root out the male plants before one can hope to successfully raise the crop of ganja."

7. The consumption of ganja and charas per head has been fixed in the Report for the different provinces at the following rates :— **Dose.**

Province.	Ganja.	Charas.
Bengal (paragraphs 342 and 349) ...	½ seer per annum ...	¼ tola per day.
North-Western Provinces (paragraphs 356 and 357).	1 seer do. ...	½ seer per annum.
Punjab (paragraph 369)	Not used ...	⅔ seer do.
Central Provinces (paragraph 378) ...	1½ seer per annum ...	Not stated.
Madras (paragraph 385)	1 seer do. ...	do.
Bombay (paragraph 391)	1 seer do. ...	do.

The consumption seems to be fixed rather arbitrarily. One reading the Report cannot help thinking that the figures have been fixed so as to bring the

quantities within the purchasing power of the people, a proposition which ought to have formed the ultimate object of the Commission to establish.

(*a*) *Paragraph 349 of the report.*—"The drug (charas) is used by people of better means. It is therefore in all probability taken more liberally and excess is more common."

(*b*) *Paragraph 356.*—"If the average annual allowance of something less than one seer be regarded as being composed of ¼ baluchar and ¾ths pathar, the cost comes to a reasonable figure."

(*c*) *Paragraph 369.*—"In the Punjab a somewhat higher rate ought to be adopted because the drug is cheaper, the price to consumers ranging from Rs. 9 to 15 per seer in this province, while in the North-Western Provinces it was Rs. 7½ to Rs. 25."

(*d*) *Paragraph 378.*—"On the other hand, the comparative cheapness and inferiority of the drug suggests a higher allowance than was thought appropriate for the Bengal calculations."

(*e*) *Paragraph 385.*—"Looking to the cheapness and comparative inferiority of Madras ganja, the average yearly allowance of the habitual consumer cannot be put at less than one full seer of 80 tolas."

8. Confining to Bengal, the yearly allowance of a moderate consumer is taken at 35 tolas or less than $\frac{1}{10}$ of a tola a day; while Babu Hemchandra Ker, Bengal witness No. 80, a retired Excise Deputy Collector, who was especially deputed by the Government of Bengal to enquire into the use of ganja in 1877, estimates the dose for a moderate consumer at 1 dram or about ⅓rd of a tola, and for an excessive consumer at 1 ounce a day, *i.e.*, 1½ and 11$\frac{1}{16}$ seers respectively as yearly allowance.

The quantity stated by several other well-informed witnesses is as follows:—

Province.	No. of witness.	Name and rank.	Daily dose of a moderate consumer.	Daily dose of an excessive consumer.	Remarks.
Bengal ...	160	Raja Piari Mohan Mukerjee, Zamindar ...	¼ tola	1 tola.	
	9	J. C. Price, Collector ...	½ „	2 tolas.	
	162	Raja Mohima Ranjan Roy Chowdhry	¼ „	1 tola.	
	231	Rajkumar Sarbadhikari, Secretary, British Indian Association	¼ „	2 tolas.	
	66	Nobin Chandra Ker, Excise Deputy Collector ...	¼ „	1 tola.	
	11	F. H. B. Skrine, Collector	¼ „	1 „	
	10	F. H. Barrow, Collector ...	¼ „	½ „	
	69	Suresh Chandra Pal, Excise Deputy Collector ...	¼ „	¾ „	
	249	District Board Sub-Committee, Mymensingh ...	½ „	5 tolas.	
	31	Colonel Garbett, Deputy Commissioner ..	¼ „	...	
	32	C. A. S. Bedford, Deputy Commissioner ...	¼ „	½ tola.	

The average daily allowance for a moderate consumer cannot therefore be put at less than ¼th of a tola and one tola for an excessive one. In the report the individual dose for charas, which is stronger than ganja, is fixed at ¼ tola a day.

9. In paragraph 344 of the Report, the proportion of excessive to moderate consumers of the hemp drugs is taken at 5 per cent. for all the Provinces, apparently without assigning any reasons. I find that this view is not supported by well-informed witnesses, a few of whom are quoted below. The proportion of excessive consumers to moderate consumers should not, I think, be taken at less than 15 per cent.— Proportion of excessive to moderate consumers of ganja.

Province.	Number of witness.	Name and rank.	Proportion of excessive to moderate consumers.
Bengal	134	Secretary, Bogra Medical Society	20 per cent.
	92	W. R. Rickets, Manager, Nilgiri State.	10 do.
	69	Suresh Chandra Pal, Special Excise Deputy Collector.	10 do.
	249	District Board Sub-Committee, Mymensingh.	20 do.
	32	C. A. S. Bedford, Deputy Commissioner.	20 do.
	10	F. H. Barrow, Collector ...	25 do.
North-Western Provinces.	35	Khan Bahadur Sayad Ali Hasan, Revenue Member, Rampur State.	10 do.
	178	Lala Nihal Chand, Zamindar and Honorary Magistrate of Saharanpur.	15 do.
	248	Drug Contractor	15 do.
	182	Raja Lachman Singh, Retired First Class Deputy Collector.	20 do.
	48	Pandit Ragobar Dyal, Deputy Collector.	20 do.
	199	Thakur Lakhan Singh, Zamindar	15 do.
	222	Manager, Court of Wards ...	10 do.
	202	Kanwar Mandhata Shah, Zamindar	15 do.
Punjab	88	Drug Contractor	15 do.
	21	Extra Assistant Commissioner ...	17 do.
	32	Inspector-General of Prisons ...	25 do.
Central Provinces ...	14	Ragunath Rao, Extra Assistant Commissioner.	20 do.
	64	Rao Sahib Balwantrao Govindrao, Jagirdar.	15 do.
	80	Abkari Contractor	10 do.
	46	The Hon'ble Gangadharrao Madhav Chitnavis, Member of the Viceregal Council.	10 do.
	15	Syad Mohamed Hasan, Extra Assistant Commissioner and Dewan, Khairagarh State.	15 do.
	17	Superintendent, Kalahundi Estate	20 do.

Cost and number of consumers in Bengal.

10. Combining the doses of moderate and excessive consumers with their proportion, I arrive at 132 tolas instead of 40 tolas given in the Report as the average quantity consumed per head per annum, and the cost per head of consumer will be Rs. 33 instead of Rs. 10 arrived at by the Commission, while the number of consumers for Bengal will be reduced from 4,00,000 to 1,14,000 for the quantity given in the Report.

Extent of use.

11. *Bengal.*—The excise system of Bengal is held to be the best and most complete of those extant in India. The ganja in that Province is subjected to two-fold taxation—(1) fixed duty on weight, (2) license-fee levied on shops by auction. Its cultivation is confined within a circuit of 16 miles, but the area of ganja itself is not restricted; the cultivators on obtaining a pass, which is granted free, being allowed to grow it on as large an area as they choose, provided they have taken the trouble to enter it in their application. The fixed duty during the last 15 years, 1878-79 to 1892-93, has been raised on four occasions, the increase on the average amounting to Rs. 2-4 per seer (from Rs. 3-13 to Rs. 6-1), and the license-fee has been more than doubled, without apparently any decrease in the *known taxable* quantity of the Province, a fact proving clearly that the gradual increment in the fixed duty that is made from time to time is not calculated to check its use.

On the other hand, the rise in the area of its cultivation—which was 482 in 1878-79 and 1,180 acres in 1892-93; the increase in the money realized by auction of licensed shops—which rose from Rs. 5,41,436 in 1878-79 to Rs. 11,05,435 in 1892-93; a fall in the incidence of recorded outturn per bigha of cultivation—which fell from $9\frac{1}{2}$ maunds in 1853-60 to $4\frac{1}{4}$ maunds in 1872-84 and 2 maunds in 1892-93; all these clearly prove that a great deal of illicit use is going on. In support of my statements I subjoin two tables: (1) showing *ganja* production and taxation in Bengal during 15 years 1878-79 to 1892-93 divided up into three periods corresponding more or less with the periods of rise in fixed duties, and (2) showing average outturn per bigha.

TABLE (1).

Period.	Rate of fixed duty.			Production.			Taxation.		
	Choor.	Round.	Flat.	Sold within the Province.	Exported.	Total.	Fixed duty.	License-fee.	Total.
	Rs. a.	Rs. a.	Rs. a.	Mds.	Mds.	Mds.	Rs.	Rs.	Rs.
1878-79 to 1881-82, 4 years.	4 0	4 0	3 8	5,315	880	6,195	8,38,015	6,13,073	14,51,088
1882-83 to 1886-87, 5 years.	5 0	5 0	4 8	5,158	1,336	6,494	11,18,012	8,50,810	19,68,822
1887-88 to 1888-89 ...	6 8	6 4	4 8						
1889-90 to 1890-91 ...	7 0	6 4	4 8	5,224	1,642	6,866	13,00,545	10,01,685	23,02,230
1891-92 to 1892-93 ...	7 0	6 4	5 0						

TABLE (2).

Period.	Area under cultivation in bighas.	Outturn.	Outturn per bigha.	Remarks.
		Mds.	Mds. sr. ch.	
1853-54 to 1859-60, for 7 years	2,280	21,637	9 19 7	Taken from the Report of the Spirit Commission of Bengal appointed in 1883, paragraphs 92—94.
1860-61 to 1871-72, for 12 years	1,566	11,443	7 12 3	
1872-73 to 1883-84, for 12 years	1,986	8,435	4 9 13	
1884-85	2,014	7,168	3 22 0	Taken from the memorandum of the Excise Commissioner of Bengal.
1885-86	1,361	7,164	5 10 0	
1886-87	2,191	7,942	3 24 0	
1887-88	1,780	8,224	4 24 0	
1888-89	2,433	8,192	3 14 0	
1889-90	2,408	7,790	3 9 0	
1890-91	2,669	7,720	2 35 0	
1891-92	1,315	7,258	5 20 0	
1892-93	3,540	6,962	1 38 0	

The Commission in paragraph 350 of their Report have stated that the "consumption (of ganja) has been stationary during the last 15 years." This opinion is evidently based on the amounts of recorded sales of ganja without apparently any consideration of its area. My idea about the illicit use of this drug in Bengal which the present fixed high duty and its unchecked growth have done so much to encourage, is borne out by the following quotations:

(1) The Commissioner of Excise, Bengal, in paragraph 17 of his memorandum, admits that "the present system of storage is admittedly defective, and it cannot be denied that some ganja is smuggled or otherwise illicitly disposed of."

(2) Lord Ulick Browne, the Commissioner of Rajshahi, as quoted by the Spirit Commission of Bengal, says that—"Probably a closer watch and closer enquiries in the matter of the total area cultivated and the outturn prevail now than was the case 30, 20, and 15 years ago; and it may be that there are some errors in the outturns for the earlier years. But, allowing for this, the difference in the present average outturn per bigha, and the gradual reduction as the duty was raised, which you bring to notice, is startling; and the conclusion is almost irresistible that smuggling has increased with the duty, and that the increase in watchfulness has had little effect in preventing it."

(3) The same Spirit Commission, in their Report, paragraph 93, remarked that "The Commission are therefore unable to record any finding on the question discussed in this chapter, but they feel bound to state plainly that in their opinion the figures raise a suspicion of extensive smuggling of the drug and of its illicit sale by vendors under cover of licenses."

(4) This strong and emphatic expression of opinion made by so strong a body roused a suspicion in the mind of the Government and gave occasion to a full enquiry to be made on the subject, which was concluded by a letter from the Government of Bengal to the Board of Revenue, dated 23rd March 1887. That enquiry confirmed the opinion of the Commission, and I will do well in quoting His Honor's own words. Paragraph 11 of the above letter runs thus:—"The Lieutenant-Governor has had an opportunity of visiting Nowgong and of personally inspecting the Ganja Department at that place; and from enquiries made by him on the spot it appears to him that the widest opportunities for fraud and smuggling exist, though no proof has ever been adduced of detected smuggling of ganja on an extensive scale. The cultivated area is never measured. The result therefore at the end is entirely speculative and uncertain."

(5) Mr. E. V. Westmacott, late Commissioner of Excise, Bengal, witness No. 2, *oral*:—"There is undoubtedly some smuggling, and the statistics do not therefore show the full consumption of ganja.

(6) William Colebrooke Taylor, Special Deputy Collector, Orissa, witness No. 36, Bengal:—"The use of ganja is said to be on the increase; can't give reasons except that the existence of so many ganja shops must have a tendency to attract consumers and increase the consumption."

(7) Hem Chunder Kerr, Government Pensioner, witness No. 80 (question No. 59):—"With increase of duty, smuggling becomes more rife (*vide* my report, paragraph 133). The first improvement that I would suggest will be the reduction of the duty levied on ganja, which has been raised rather too high."

(8) Mr. G. Toynbee, Commissioner, witness No. 4:—"The Excise officers were constantly complaining of the smuggling, but I could not say the extent to which it was carried on. The complaints were never ceasing."

12. *Extent of use.—Assam.*—Assam follows suit with Bengal; the following are its figures for the similar period:—

Period.	Rate of fixed duty.			Imported in the Province.	Sold in the Province.	Taxation.		
	Chcor.	Round.	Flat.			Fixed duty.	License-fee.	Total.
	Rs. A.	Rs. A.	Rs. A.	Mds.	Mds.	Rs.	Rs.	Rs.
1878-79 to 1881-82, 4 years ...	4 0	4 0	3 8	655	579	81,975	86,130	1,68,105
1882-83 to 1886-87, 5 years ...	5 0	5 0	4 8	671	607	1,11,785	1,19,600	2,31,385
1887-88 to 1888-89 ...	6 8	6 4	4 8	734	673	1,35,823	1,28,466	2,64,289
1889-90 to 1890-91 ...	7 0	6 4	4 8					
1891-92 to 1892-93 ...	7 0	6 4	5 0					

13. *Extent of use.—North-Western Provinces and Oudh.*—In paragraph 359 of the Report it is admitted that in the last 20 years, from 1873 to

1892, the revenue from hemp drugs has grown from 4 to 7 lakhs, and that the consumption of ganja and charas is proportionately on the increase. The statements of a few witnesses of this Province seem worth quoting.

(1) Mr. T. Stoker, Excise Commissioner, witness No. 6, North-Western Provinces, says in his oral statement :—" My idea that the consumption of charas is increasing is based on observation rather than statistics. I have explained how difficult it is to get accurate figures. The consumption is generally believed to be increasing in the eastern districts. I believe that to be undoubted."

(2) Witness No. 229, North-Western Provinces, Richard Burn, Excise Officer* :—" The use of these drugs is said to be increasing because, under the Moghul rule, it was forbidden under such heavy penalties as whipping or mutilation, while now it is allowed, and the use is spreading."

(3) Witness No. 8, North-Western Provinces, Mr. H. Fraser, Collector, Bijnaur :—" The use of charas is, I believe, largely increasing, as shown by the following figures of import :—

1890-91	...	...	...	...	Maunds 79
1891-92	...	...	...	...	„ 100
1892-93	...	...	...	...	„ 111"

(4) Witness No. 182, North-Western Provinces, Raja Lachman Singh :—" It seems on the increase—

(1) Because the facility of obtaining them is greater.

(2) Caste-bonds and reverence for religious commands have been much destroyed by the development of customs and freedom of Europe."

14. *Extent of use.—Punjab.*—In paragraph 372 of the Report the increase of consumption of charas is admitted :—" From 1881-82 onwards there is a steady increase in the figures for charas, interrupted only by a fall in the year 1890-91, which, however, was more than made up by the rise of the following year."

15. *Extent of use.—Central Provinces.*—In paragraph 376 of the Report the increase of the consumption of ganja in these Provinces is also admitted :—" The figures of consumption of ganja given in paragraph 52 of the Excise memorandum show, since 1887-88, increase in every district except Hoshangabad and Narsinghpore. The decrease in these two districts is small : the increase in several districts is large." In paragraph 379 of the Report the statement of Mr. Neill, Judicial Commissioner, is worth reading. As one of the reasons of increase he says :—" The excise arrangements have advertised the drug and made it popular and supplied a superior quality of it."

(1) Paragraph 3 of the memorandum of the Excise Commissioner runs thus :—" In 1872-73 in almost every district a few plants were to be found in the garden of cultivators."

* NOTE.—This witness is not reported.

Paragraph 4: "In 1873-74 the amount privately grown for home consumption was insignificant."

This shows that the production and consumption of ganja in these Provinces up to 1874 was very much limited. In April 1875 the cultivation of ganja was for the first time confined to Khandwa, in Nimar district; and its result has been not only that consumption of ganja has been stimulated and increased within the Province, but also that large quantities of ganja are exported to other provinces.

(2) The following statement contains quinquennial averages for the last 15 years:

Period.	Export in maunds.	Quantity sold and consumed in the Provinces.	Taxation.		
			Fixed duty.	Licensed duty.	Total revenue.
	Mds.	Mds.	Rs.	Rs.	Rs.
1878-1879 to 1882-1883	2,056	726	48,207	46,348	94,556
1883-1884 to 1887-1888	6,800	860	67,602	1,08,022	1,75,625
1888-1889 to 1892-1893	5,048	1,056	81,495	1,36,509	2,18,004

(3) In paragraph 34 of his report for 1884-85 the Excise Commissioner states:—"While in most districts of the province the number of ganja shops remained stationary, the consumption of taxed ganja increased, in spite of an increase of prices, which in some districts followed the enhancement of the license-fees for retail vend. The probable explanation is that the improved quality of the issues of the drug attracted anew the consumers who had been driven to seek their supplies elsewhere by the poorness of the stuff sold by Government licensees in 1882-83."

(4) Paragraph 41, Excise Report for 1887-88, by Mr. H. V. Drake-Brockman: "The part played by the Khandwa store as entrepôt for the supply of the ganja demand of those provinces is quite insignificant when compared with its use as a mart for the convenience of foreign purchasers. To it throng traders from Bhopal, Indore, &c., States; and licensed vendors from the North-Western Provinces compete with contractors from Berar for the purchase of the cultivator's stock. Between 6,000 and 7,000 maunds are annually exported to other provinces."

16. *Extent of use.—Bombay and Madras Presidencies.*—The consumption of charas in these parts is as yet unknown and that of ganja only small, but it seems to be increasing on, as V. Guravaya Sastri Guru, Member, Taluka Board, witness No. 166, Madras, says: "The use is increasing. The recognition of the Government of the sale of these drugs in open markets is in my opinion the sole cause of the increase." It must also be noted that in Madras the excise system was introduced only in 1890-91, and ganja of a *superior* quality like that manufactured in Bengal and the Central Provinces is still unknown.

17. Of the witnesses who expressed any opinion about the extent of consumption of hemp drugs, 357 stated that their use is increasing, while 148 stated that it is decreasing. The following is an analysis of them:

Province.	No decrease.							Decrease.		
	Steady.			Increase.			Total.			
	Officials.	Non-officials.	Total.	Officials.	Non-officials.	Total.		Officials.	Non-officials.	Total.
Bengal ...	20	8	28	26	35	61	89	33	29	62
Assam ...	...	2	2	3	11	14	16	3	1	4
North-Western Provinces.	11	17	28	37	68	105	133	6	4	10
Punjab ...	6	7	13	12	18	30	43	6	1	7
Central Provinces	...	1	1	13	24	37	38	9	11	20
Madras ...	19	6	25	36	31	67	95	15	14	29
Bombay ...	18	8	26	11	12	23	49	6	4	10
Sind ...	2	3	5	6	6	12	17	...	...	...
Berar ...	3	1	4	4	4	8	12	2	3	5
Ajmere ...	...	...	...	...	...	...	...	1	...	1
Coorg ...	...	1	1	...	...	...	1	...	...	...
Total ...	79	54	133	148	209	357	490	81	67	148

18. There are no complete statistics for the consumption of hemp drugs available for all the Provinces; a statement of revenue is therefore appended, from which a rough inference might be made as to the rise of the consumption of hemp drugs. The revenue during the last 20 years has nearly doubled itself.

Statement of Revenue from Hemp Drugs.

Year.	Bengal.	Assam.	North-Western Provinces and Oudh.	Punjab.	Central Provinces.	Madras.	Bombay.	Sind.	Berars.	Ajmere-Merwara.	Coorg.	Baluchistan.	Total.
1873-74	10,96,621	99,052	4,07,822	1,43,921	50,707	...	54,561	76,681	Not given.	2,265	Not given.	Not given.	
1874-75	10,75,584	1,04,581	3,91,974	1,46,232	57,082	...	55,643	76,644		2,691			
1875-76	11,37,149	1,09,257	4,24,002	1,38,232	55,053	...	52,977	78,195		3,338			
1876-77	12,15,780	1,19,742	4,37,426	1,43,937	60,626	...	52,981	86,366		3,501			
1877-78	14,04,372	1,54,726	3,70,993	1,48,477	69,263	...	50,126	79,320		3,424			
Total of 5 years ...	59,29,506	5,87,358	20,35,217	7,20,799	2,92,731		2,66,288	3,97,206		15,219			1,02,44,324
Average	11,85,901	1,17,471	4,07,043	1,44,159	58,546	...	53,257	79,441		3,043			20,48,864
1878-79	13,68,332	1,52,588	4,33,425	1,38,512	83,144	...	49,234	73,905		3,260			
1879-80	13,17,343	1,55,135	4,09,068	1,39,577	89,937	...	50,060	65,201		3,330			
1880-81	14,92,550	1,78,074	4,16,298	1,31,574	92,850	...	47,788	75,304		3,675			
1881-82	17,55,673	1,86,780	4,55,448	1,37,563	97,236	...	59,314	84,336		3,485			
1882-83	18 99,530	1,97,674	4,97,787	1,39,487	1,11,095	...	81,362	87,888		4,816			
Total of 5 years ...	78,33,428	8,70,251	22,12,026	6,86,713	4,74,262	...	2,87,758	3,86,634		18,506			1,27,69,578
Average	15,66,685	1,74,050	4,42,405	1,37,342	94,852	...	57,551	77,326		3,701			25,53,915
1883-84	20,12,133	2,39,872	5,53,356	1,44,640	1,29,207	...	94,337	95,114		4,810	652		
1884-85	20,25,922	2,46,788	5,49,279	1,46,608	1,62,340	...	1,04,314	1,03,857		5,931	658		
1885-86	19,85,043	2,25,506	6,03,173	1,48,620	1,92,679	...	1,08,497	98,379		5,431	658		
1886-87	21,18,048	2,47,285	6,70,605	1,52,771	2,12,691	...	1,10,325	1,06,206		5,430	698		
1887-88	22,92,060	2,22,511	6,48,432	1,47,565	1,90,528	...	1,18,875	1,14,723		5,900	698		
Total of 5 years ...	1,04,33,206	11,81,962	30,24,845	7,40,204	8,87,445	...	5,36,348	5,18,279		27,502	3,364		1,73,53,155
Average	20,86,641	2,36,392	6,04,969	1,48,040	1,77,489	...	1,07,269	1,03,655		5,500	672		34,70,631
1888-89	23,65,871	2,39,061	7,08,504	1,47,048	2,00,168	...	1,20,552	1,23,164		5,375	698		
1889-90	23,08,433	2,50,875	7,31,352	1,54,885	2,02,419	4,890	1,21,020	1,37,544		4,935	798		
1890-91	23,65,064	2,79,528	6,92,214	1,55,68		8,805	1,30,709	1,36,405		6,335	798		
1891-92	23,50,562	2,90,219			2,12,580								
	24,50,705		7,12,087	1,57,297	2,29,251	54,989	1,33,328	1,41,614		6,740	798	900	
1892-93	18,40,62	3,03,633	7,04,788	1,70,854	2,54,931	47,292	1,40,593	1,65,310		7,270	798	4,175	
Total of 5 years ...	1	13,63,316	35,48,945	7,85,771	10,99,349	1,15,976	6,46,202	7,04,037		30,655	3,890	5,075	2,01,43,851
Average	23,68,127	2,72,663	7,09,789	1,57,154	2,19,869	28,994	1,29,240	1,40,807		6,131	778	2,537	40,28,770

19. Public opinion, social and religious customs and class of consumers have an intimate connection with one another. They have been discussed in the Report at different places, but I will treat all of them together. **Public opinion.**

Paragraph 489 of the Report deals with the question of public opinion (social and religious) which was put to the witnesses in question No. 33.

I do not agree in the conclusions drawn in the above paragraph—

(1) Because it was very essential to discriminate between the use of bhang and that of charas or ganja.

(2) Because the expression "disapproval" used therein is quite inadequate to convey appropriately the ideas expressed by the witnesses against the use of the drugs.

On careful examination of the evidence I find that public opinion is very strongly against the use of ganja and charas, that almost all the witnesses condemn their use in unqualified terms, and that the very words *ganjakhor* and *charaskhor* are words of great reproach, like tipplers or drunkards in English, as admitted in paragraph 489 of the Report, but that the use of bhang is not so much in disrepute. The point under discussion is an important one, and requires more attention than has been given in the Report.

20. The Mahomedan religion strongly prohibits the use of liquor and other intoxicants, as already admitted in the Report, para. 437.

21. The Sikh religion also prohibits the smoking of ganja and charas and even tobacco, as admitted in para. 440 of the Report.

22. As to the Hindu religion, I find that in ancient times of the sacred scriptures ganja and charas smoking was unknown. Neither any of the Smrities nor any of the ancient treatises on Ayurveda, *i.e.*, Hindu Medical Science, has a mention of it. It is admitted in para. 19 of the Report that the hemp plant is not indigenous to India. Bengal witness No. 52, M. Chakravarti, Sub-Divisional Officer, says in answer No. 25 that "with the later Mahomedan rule, tobacco-smoking and analogically ganja-smoking came into vogue." Bombay witness No. 91, Dr. Garde, Representative, Sarvajanik Sabha, Poona, says in answer No. 40 (5) that "the date of introduction of these narcotics in India cannot, in my opinion, go back beyond the 13th century A.D. Even to this day these narcotics have not made their way to any great extent in Southern India, where charas is hardly known by name, bhang scarcely even drunk, and ganja only smoked by a very insignificant portion of the population."

(*a*) It has been shown in para. 65 of this note that ganja and charas are not less deleterious in their effects, if not more, than liquor. I am therefore justified, I think, in coming to the conclusion that the prohibition against liquor enjoined in the Hindu Shastras should also be held to apply to the use of these hemp drugs with equal force, if not more. In Vishnu Smriti Chapter XLI, sloka 3, I find that eating nutmegs or other plants similar to intoxicating

drinks in their effects upon the system is one of the crimes causing defilement.

(*b*) The Institutes of Manu, called Manu Smriti, is the universally recognized authority on the Hindu religion, and the following instructions about the use of liquor are therefore quoted from it:—

(*c*) In Chapter XI of the above all the sins and crimes that can be committed by a man are divided into various classes according to their nature, and distinguished by different names. The worst of all the sins are enumerated as five in number and are called *Panchmahapatak*, the drinking of alcohol is one of them.—*(See Sloka 55, Chapter XI.)*

(*d*) There are numerous slokas in Manu Smriti in which the use of liquors and other intoxicants is prohibited, but it will suffice to quote the following verses from Chapter VII:

Sloka 45.—"Let him carefully shun the ten vices, springing from love of pleasure, and the eight proceeding from wrath, which (all) end in misery."

Sloka 47.—"Hunting, gambling, sleeping by day, censoriousness, (excess with) women, intoxication, (an inordinate love for) dancing, singing, and music, and useless travel are the tenfold set (of vices) springing from love of pleasure."

Sloka 48.—"Tale-bearing, violence, treachery, envy, slandering, (unjust) seizure of property, reviling, and assault are the eightfold set (of vices) produced by wrath."

Sloka 50.—"Intoxication, dice, women, and hunting, these four (which have been enumerated) in succession, he must know to be the most pernicious in the set that springs from love of pleasure."

Sloka 51.—"Doing bodily injury, reviling, and the seizure of property, these three he must know to be the most pernicious in the set produced by wrath."

Sloka 52.—"A self-controlled (king) should know that in this set of seven, which prevails everywhere, each earlier named vice is more abominable (than those named later)."

The eighteen vices enumerated above have been compared with one another, and it has been ruled that intoxication is the most pernicious of all the vices. Under these injunctions the use of charas and ganja should be taken as strictly prohibited.*

23. An analysis of the evidence received by the Commission with regard to the use of the hemp drugs is given in the following statement, which shows at a glance the public opinion as it prevails throughout the country at present.

* NOTE.—The original Sanskrit slokas above referred to with their translation will be found in Smriti Prakash, a book which I have compiled and which contains a large collection of Hindu religious precepts from all the Smritis in Sanskrit, with their translation in Hindi and Urdu.

GANJA AND CHARAS.

Province.	Disrepute.			Not disrepute.		
	Official.	Non-official.	Total.	Official.	Non-official.	Total.
Bengal	87	69	156	2	3	5
Assam	7	14	21	2	...	2
North-Western Provinces	46	81	127	3	5	8
Punjab	31	25	56	...	...	...
Central Provinces	21	38	59	1	1	2
Madras	73	56	129	1	5	6
Bombay	32	27	59	...	...	...
Sind	9	6	15	...	3	3
Berars	6	7	13	...	...	...
Ajmere...	...	...	...	...	...	...
Coorg	...	2	2	...	...	...
Beluchistan	1	...	1	...	...	...
Total	313	325	638	9	17	26

NOTE.—Witnesses who expressed no opinion on this question have not been included in this table.

24. The use of the hemp drugs is so much in disrepute that even the cultivating classes do not like to grow it, which will be seen from paragraph 174 of the Report, which runs thus :—

"Duthie and Fuller write that hemp-growing is restricted to the lowest classes of cultivators, being considered beneath the dignity of the higher castes. So much is this the case that the phrase 'may hemp be sown in thy house' is one of the commonest of abusive imprecations. Mr. Dharmanand and other witnesses corroborate this account."

25. The sale of liquor and hemp drugs has always been considered very objectionable and disreputable in India. There is no evidence to show that hemp drugs were ever sold by any class of persons before the introduction of the excise system. The sale of liquor was, however, practised by a certain class of people called "kalwars," who were considered so much impure that no high class persons would even touch them and no Brahman would receive a gift from them.

26. The use of ganja and charas is so much in disrepute that out of about 1,600 witnesses before this Commission not more than half a dozen were found to be consumers of these drugs, while there were a good many of the witnesses who used opium and admitted the habit without any hesitation before the Royal Opium Commission.

27. The class of consumers are also very low. As stated in paragraph 488 of the Report, "there are religious objections to the use of intoxicants by Mahommedans," and that "many of the Hindus who are both orthodox and respectable consider it contrary to their religion to indulge in these or any other intoxicants," that "orthodox Sikhs do not smoke and therefore regard ganja and charas as prohibited." It is mentioned there that ganja and charas are chiefly used by—

(1) Fakirs and wandering mendicants, Sadhus, and Pandahs, &c.

(2) Lower classes of both Hindus and Mahommedans, such as artizans, cultivators, fishermen, palki-bearers, day labourers, chamars, &c.

(3) Domestic servants of all kinds, as syces, dhobis, &c.

(4) Aborigines of different races, as Santhals, &c.

(5) Tradesmen, &c., of the lower middle classes.

It is further stated that "these are among the classes specially mentioned by witnesses as smoking hemp drugs. Among the upper classes this habit is generally regarded as exceptional and indicating a special tendency to dissipation, but not so among these lower classes." Bhang is also occasionally used more or less generally and practically by all classes on certain feast days at times of social rejoicing."

28. In this country the females do not smoke ganja or charas at all. In paragraph 468 of the report the fact is thus mentioned: "It is to be noted, however, that with the very rarest exceptions the evidence points to the use of the drugs by males only. Women would therefore appear either not to require or to be denied the benefits ascribed to the drugs."

29. In all parts of India the use of hemp drugs is much in disrepute, and there are hundreds of national songs in every dialect condemning their use. I give the following songs which have been mentioned by some of the witnesses:—

Name of province.	Witness No.	Original in Roman characters.	Translation in English.
Bengal ...	108	"Ganja khále báper nám bhule jai."	"He who smokes ganja forgets even his own father's name."
		"Siddhi khále budhi barey, ganja khále lukhi chare."	"The man who drinks bhang thrives, he who takes ganja goes to the bad (is deserted by the goddess Lukhi)".
North-Western Provinces.	29	"Charas piye, gur gyán ghate, bíj jale wá ke andar ká; khánsat, khánsat pet phate, múnh ho jai jaisá bandar ká."	"If one smokes charas, one's learning is diminished, the seed is burnt up within, coughing goes on till one's belly bursts, and one's face grows red like that of a monkey."

Name of province.	Witness No.	Original in Roman characters.	Translation in English.
Punjab ...	70	"Wuh to charasi hai us ka kya thik."	"He is a charas smoker, you can't depend on him."
		"Huqqe to luqqe piwain afyun jangli khain ;	"Boasters smoke hukkas and wild people eat opium ;
		Bhang piyen so baore ut posti jain."	Those who smoke bhang are mad, and those addicted to the use of poppyheads die childless."
		"Ut posti jain charas ke piwan hare."	"Childless die who use poppy-heads, as also charas smokers ;
		Ghul ghul kar marjain maha papi hatyare."	"Sinners of this type die after a protracted illness."
		"Kahen Girdhar Kab Rai unhon men ek na achha ;	"Girdhar Kabra, the poet, says no one is good among them ;
		Karke madhra pan bat men loten bachha."	(Those mentioned above) they use liquor and like children lie down in the way."
		"Charas pila gur gyán ghala aur bij ghala waka ander ka ; sukh sukh lakar ho jawa, múnh howa jaise bander ka."	"A charas smoker loses religious wisdom imparted by the guru as well as vitality. He is gradually reduced to a mere skeleton, and his face resembles that of a monkey."
	8	"Khang karun, khurak karun, ankhian kolon aund karun, aje-bhi na mare, to main ki karun."	"I give (you) cough. I give (you) itch. I make (you) blind in your eyes. If (still) you do not die, what can I do (more)."
	29	"Bhang jab charti hai, kya kya maza diklati hai ?	"When the effects of bhang rise (to the head), what feelings do they produce ?
		Khat ko zor se pakarto ki kidhar jati hai."	(The man who has drunk bhang) holds on tight to his bed (and wonders) where it is going."
		"Ganja piwe mukh zard hai,	"Whoever smokes ganja, his face grows pale.
		Bibi kahe namard hai,	His wife will complain, he is impotent,
		Bhai kahe kuch dard hai.	His brother will say he is afflicted with pain,
		Ashak nashae me garq hai."	But the smoker will turn to his chillum again."
Madras ...	157	.....	"He gave angi (coat) who smoked bhangi,
			And became a manga (monkey)."
Sind ...	27	"Ganja aur suka pine se hurmat gayi,	"Through smoking ganja and tobacco character is lost and modesty destroyed. Does not the heart of that man break who sells corn to buy ganja ?
		Láj sharm gayi chhut,	
		Anaj bechke lae ganja,	

Name of province.	Witness No.	Original in Roman characters.	Translation in English.
		Gayi haiye ki phut?	My heart was broken indeed. I did it without thought, and all who act without thought will have to repent."
		Gayi haiye ki phut,	
		Kina yeh bina bichare,	
		Bina bichare saukare,	
		So pachhe pachtae."	
Sind ...	20	Charas nahi, kahir hai.	"It is not charas, but a curse.
		Kaleja to jal gaya.	It burns the chest and heart to its worse.
		Anki me lahir hai.	It brings on dimness of the eyes.
		Khang karun, khansi karun,	To phlegm and cough it must give rise.
		Ankhon se andha karun,	To blind the eyes it never fails.
		Paon se langra karun,	Or cripple limbs that once were hale.
		Ne marre to me kya karun."	In what but death ends its sad tale?"

Religious and social customs.

30. Paragraph 450 of the Report contains the general conclusions on this subject. It is stated therein that "charas, which is a comparatively new article of consumption, has not been shown to be in any way connected with religious observance"; "that as regards Northern India the Commission are of opinion that the use of bhang is more or less common everywhere in connection with the social and religious customs of the people," and that "as regards ganja they found that there are certain classes in all parts except the Punjab who use the drug in connection with the social and religious observances."

In the above statements I take exception to what has been said about ganja, which has no connection whatever with any social or religious customs.

31. It has been shown in paras. 19-29 of this note that the use of ganja and charas is much in disrepute; in para. 27 that the use is confined to low class people, and in para. 28 that females do not use them. Moreover, there is no sect, caste or class of people, high, middle, or low, in which their consumption is sanctioned by religion or society. If their use had any connection with any religious or social customs, all the members of a class, whether high or low, would have used them. The absence of their use among any class as a body clearly shows that they have no such connection.

32. It is admitted in paragraph 451 of the Report that, "as a matter of fact, it is not usual for those who use the drugs, specially those who smoke them, to do so in the presence of others. It is usually only the dissipated who make a practice of publicly using intoxicants". A few of the many witnesses are also quoted.

North-Western Provinces witness No. 49, Pandit Dharmanand Joshi, Settlement Deputy Collecter: "Charas smokers will take care not to smoke in presence of their superiors or those whom they venerate."

Bombay witness No. 104 Desaibhai Kalidas, Government Pleader: "Consequently when any one belonging to these three classes (Brahmans, Chatris, and Vaishyas of Gujrat) smokes or otherwise uses ganja, he has to do it in secret, and is ashamed of it in public."

Madras witness No. 173, Secretary, Gooty People's Association: "In these parts the consumers are held as contemptible, and a ganja smoker himself would not proclaim his habit, and feels it a disgrace to be known as a ganja smoker, but this remark is not applicable to fakirs and lowest classes of people." These drugs therefore can have no connection with any social or religious custom because all ceremonies are observed jointly by all the members of a family.

33. In para. 436 of the report a mention of Trinath mela is made. This mela of Trinath can in no way be called a religious one—

First, because its origin is of a very recent date, about the year 1867;

Secondly, because, as admitted in the last sentence of the above paragraph, this form of worship is dying out; and

Thirdly, because it is observed by Hindu and Muhammadan consumers of the drug alike, which would never have been the case had it been a religious worship of any of them. There is evidence to show that this mela is chiefly a creation of ganja-smokers. Witness No. 63, Abhilas Chunder Mukerjee, referred to in the above paragraph of the Report, as regards this form of worship, says in answer to question 33 that "educated people and people of the higher and middle classes in this country treat the ganja smokers with feelings of disrespect and call them "ganja-khor," "bhangi," "ganjari," &c.

34. I do not agree to the expressions contained in paragraph 435. It is a well-known fact that at the time of worship, water is poured on the image of Siva, the water being mixed with milk, sugar, and other ingredients. Sometimes those persons who are fond of taking bhang mix it with the water, but ganja is never so used. When the consumers of ganja cannot use it in presence of their elders, it can never be said or even imagined that it is consumed by the worshippers in temples, where as a matter of fact all kinds of smoking, even tobacco, are not allowed and are considered extremely objectionable.

35. In paras. 443 and 449 the statements of Reverend Campbell, Mr. Merriman (Madras witnesses), and Messrs. Campbell, Modie, Charles, Kothawoli, and Lamb (Bombay witnesses), have been quoted. In my opinion it is not safe, nor is it desirable to rely upon the evidence of European gentlemen only when questions connected with the Hindu or Muhammadan religious and social customs are under consideration. Bengal witness No. 1, the Hon'ble D. R. Lyall, says "but on this point natives will give better evidence," and in answer to question No. 33, "Here again native evidence will be best."

36. I therefore hold that, as the public opinion (social or religious) is quite against the use of ganja and charas, as has already been shown, and as they have no connection with the social and religious customs of the people, none but a

few of the habitual consumers will feel any hardship by their prohibition, and that class too for a time only. On the contrary, even the family members of the consumers will consider the prohibition of the drugs as a blessing to them. There will be no public discontent nor any interference with the religious and social customs of the people, if ganja and charas are prohibited, as the Hon'ble Gangadharrao Madhav Chitnavis, Member of the Viceregal Legislative Council, witness No. 46, Central Provinces, says: "It would not be considered as an interference with religion to prohibit either ganja or bhang."

37. A few of the many witnesses are quoted in statement I appended to this note in justification of the above views; but the following expressions made by Mr. James Wilson, Deputy Commissioner, Shahpur, Punjab, witness No. 14, deserve special attention:—

"I recently had all the intelligent and respectable Hindus of the district assembled in connection with the ascertainment of their tribal customs. I asked those who wished to have opium restricted to stand up, and no one stood up. I then asked those who wished the present system of dealing with opium continued, and they all stood up with acclamation. I then put the same questions regarding charas and bhang, and nearly the whole assembly stood up for prohibition; for continuance of the present state of things only one or two stood up. These said that fakirs would suffer, and the others said that would not matter: they would soon get over it. Some of the assembly, even of those who declared for prohibition, were themselves moderate consumers of bhang. They had clearly bhang as well as charas before their minds. Several of the persons were dealers in opium, and very few, if any, dealers in the hemp drugs. There were about 100 present at this meeting, mostly shop-keepers from all parts of the district and representative of the best feeling of their class.

"A number of the more respectable object to charas because their young men get tempted by the fakirs to use it and ultimately join that body. Some of the excessive smokers of charas have themselves expressed regret to me that they ever took to the habit, much in the way that excessive consumers of liquor will do. These men were fakirs; but a fakir in Shahpur is not only a religious devotee, but often an idle good-for-nothing, who assumes a religious character."

Effects.

38. *Physical.*—The medicinal use of the hemp drugs, as noted in paragraphs 458-67, has been somewhat exaggerated, but so far I agree, that they are *sometimes* used medicinally. Such use is, however, confined more to bhang than to ganja or charas, and it was very necessary to make a distinction between them in the Report. As I am not going to advocate for the prohibition of hemp drugs as far as their medicinal use is concerned, I would not discuss this point further, but content myself with quoting the following sentence from paragraph 469 of the Report:—

"A drug may be a useful medicine but a bad thing to allow into the market freely for general consumption."

39. As to paragraphs 468 to 473 of the Report, the beneficial effects, if any, can be attributed to bhang only, and very rarely to ganja and charas. As to their being food-accessory or digestive, my opinion is that a man who has become habituated to the use of the hemp drugs cannot derive any such benefit

from their use even if it is presumed that they have any such beneficial quality. There is sufficient evidence on record which shows that the use of these drugs improves digestion for a short time only, and that afterwards it destroys the power altogether. The experiments of Dr. Cunningham, mentioned in paragraph 483 of the Report, shows "that the only persistent symptom attending the treatment during life was a considerable diminution in appetite for food, and so on." It is according to the general principles of medical science that, however good or powerful a medicine may be, it loses its effects when used for a long time, and when the medicine is tolerated in the constitution.

40. It is stated in the Report, paragraph 471, that "hemp drugs both as smoked and as drunk are used as a febrifuge or preventive of the diseases common in malarious tracts or arising from the use of bad water." But this is not the case, and they are very seldom used for such purposes, as will be seen from paragraph 339 of the Report, which runs thus:—"North-east and east of Calcutta lies a huge tract of low consumption, comprising the districts of Noakhali, Khulna, Jessore, Nadia, Backergunj, and Faridpur. This fact har ly bears out the theory that residence in low-lying country and river-side life are very intimately connected with the ganja habit."

41. As to their use giving staying power, I must say that there seems to be no good foundation for such a belief. Mr. Stoker, Commissioner of Excise, witness No. 6, North-Western Provinces, says in his oral statement that—

"As a District Officer and Settlement Officer I got into intimate contact with the classes. I believe that these drugs are comparatively little used among the agricultural classes as compared with the town population and that excess is still rarer."

Mr. F. G. Sly, Settlement Officer, witness No. 10, Central Provinces, says:—

"The good cultivating caste say that they never use ganja or bhang as a stimulant to hard work, but that during the season of hard work they increase the quantity of their food and more particularly of ghee and milk."

Bhimbhai Kirparam, Deputy Collector, Bombay, witness No. 24, says:—

"In Guzrat Kumbies and Kolis are the principal agricultural classes. They eat opium. Therefore very few cultivators in Guzrat take ganja."

Deshaibhai Kalidas, Government Pleader, Bombay, witness No. 104, says:—

"Among the agricultural classes also ganja-smoking is found to a small degree only. On this side, even among the Sudras, ganja-smoking is so unfavourably looked upon that one from that class also would consider it low breeding to use it in public."

No one can deny that the poor cultivators of this country have to undergo more severe exertions, exposure, and fatigue than the common labourers and beggars. It naturally follows, then, that if these drugs possessed any such quality, the cultivators would have surely used them. Besides this the number of consumers is so limited as one in about every 500 of the population, and the overwhelming majority of labourers in India and Burma can do very well without them, as Mr. F. G. Sly, Settlement Officer of the Central Provinces, witness 10, says:—

"The information collected, however, tends to show that the use of hemp drugs as a stimulant to hard work is very limited indeed even amongst aborigines."

See also Trinidad Commission's remarks in paragraph 46 of this note on this point.

It is also to be taken into consideration that if a man can undergo harder exertions under the influence of ganja than his might would allow, his health is surely to break down sooner or later, and that it is rather a kind of inhumanity on the part of his employers to extort more work from him than his natural health and strength can permit.

42. As to paragraph 493 of the Report, the question of moderate and excessive use is a very important one. In the questions framed by the Commission much stress was laid on this point and separate questions were framed to make a distinction between them, as will be found on reference to the following questions :—

Moderate use.	Excessive use.
45, 47, 49, 51.	46, 48, 50, 52, 53.

But as no definition of the words moderate and excessive was made in the instructions attached to the question papers, many of the witnesses were much puzzled and not unfrequently misled. This difficulty has been accepted in the Report in paragraph 477 thus: "There is a good deal of justification of the failure of many witnesses to discriminate between moderate and excessive consumption. That which is moderate and harmless to one man may be too much to another." Some of the witnesses are quoted here in support of this. Surgeon-Lieutenant-Colonel M. D. Moriarty, M.D., witness No. 79, North-Western Provinces, says in his reply to questions 45 and 46 that "it is not easy to define moderate and excessive," and further on he has very truly said that "the greater the use, the greater the effect." Mr. E. V. Westmacott, late Commissioner of Excise, Bengal, witness No. 2, says, "I do not know how a moderate smoker is to be distinguished from an excessive smoker." Mr. H. M. Weatherall, Manager, Nawab's State, witness No. 197, Bengal, says, "It is very difficult to draw the lines where the harm begins." Surgeon-Lieutenant-Colonel A. Crombie, Bengal, witness No. 104, says, "I should cease to call smoking moderate when it began to affect the man's demeanor. This would be my definition of moderate smoking." Dr. J. W. Macnamara, M.D., Assam, witness No. 20, says in his oral examination that, "As to these intoxicants, I do not think the police would be in a position to discriminate between the moderate or excessive use. I do not think I could do it myself." Atul Chundra Roy, Assistant Surgeon, Assam, witness No. 25, says, "It is very difficult to draw a line of demarcation between moderate and immoderate use. As far as my experience goes habitual consumers scarcely keep within such a bound as not to be more or less sufferers in the long run." Mr. G. Godfrey, Commissioner, Assam, witness No. 1, says, "The excessive use of ganja has most pernicious effects, and it must be remembered that what is a moderate quantity for one person may be an altogether excessive quantity for another." Mr. S. S. Thorburn, Commissioner, Punjab, witness No. 3, says, "The difficulty is to know what constitutes moderate use. What is moderate for some would kill others." Surgeon-Major G. W. P. Dennys, Punjab, witness No. 34, says, "I do not know where to draw the line between moderate and immoderate. It really depends on how often and how rapidly a man inhales the smoke from his chilum." Dr. S. L. Dobie, Madras, witness No. 84, says, "In the case of alcohol I should of course discriminate between the moderate and excessive use. In the case of ganja I could not. It is much easier for a European to judge of alcoholism than of ganja."

The fact is that small doses of these drugs may not produce noxious effects for some time, but such effects are sure to follow sooner or later, smaller or greater, according to the constitution, habits of life, and circumstances of the consumer. There is in them a slow and insidious undermining process going on in their digestive, respiratory, and nervous systems which predispose them to acute diseases and cut their lives short. Brigade-Surgeon-Lieutenant-Colonel W. R. Hooper, witness No. 74, North-Western Provinces, says, "The physical and mental breakdown being gradual but certain in proportion to the rate and amount of indulgence and the constitution of the individual." Therefore the evil effects of the drugs should be taken into consideration without regard to the quantity consumed.

43. Again an overwhelming majority of evidence show that in the case of the use of hemp drugs there is a great tendency for the moderate habit to develope into the excessive. Question No. 31 was put to the witnesses on this point. The above conclusion is accepted in paragraphs 480 and 477 of the Report, which run thus: "It is a general belief that there is a tendency for the moderate habit to develop into the excessive," and that, "the moderate habit may undoubtedly develop into excess in some cases where excess might not have been looked for." In such a case it is quite immaterial to make a distinction between the effects of a moderate dose and that of an excessive one.

44. It has been alluded to in the Report in several places that the evil results from the use of hemp drugs have not hitherto obtruded themselves on observation, and that therefore some witnesses have abstained themselves from answering the questions 45 and 46 about the evil effects. But I find that a large majority of witnesses expressed their opinions about the effects of the use of these drugs, as will be seen from the following two statements, one of which is an analysis of the evidence of the medical witnesses and the other of the non-medical witnesses. An abstract of the two statements stands thus:—

Total witnesses (excluding Burma).			DELETERIOUS.						NOT DELETERIOUS.					
			Moderate.			Excessive.			Moderate.			Excessive.		
Medical.	Non-medical.	Total.	Medical.	Non-medical.	Total.	Medical.	Non-medical.	Total.	Medical.	Non-medical.	Total.	Medical.	Non-medical.	Total.
328	812	1,140	209	414	623	286	561	847	76	167	243	1	1	2

It shows that out of 1,140 witnesses, 847 or 74·2 per cent. declare the excessive use to be deleterious against only 2, and that 623 or 54·6 per cent. declare even the moderate use to be deleterious against 243 or 21·3 per cent.

An analysis of evidence on effects from native states and army will be seen in paragraphs 66 and 67 of this note.

No. I.

Statement of medical evidence.

Names of provinces.	NOS. OF WITNESSES				DELETERIOUS.								NOT DELETERIOUS.								INSANITY.				IMPOTENCY.				REMARKS.
					MODERATE USE.*				EXCESSIVE USE.				MODERATE USE.				EXCESSIVE USE.												
	Superior.	Subordinate.	Private practitioner.	Total.	Superior.	Subordinate.	Private practitioner.	Total.	Superior.	Subordinate.	Private practitioner.	Total.	Superior.	Subordinate.	Private practitioner	Total.	Superior.	Subordinate.	Private practitioner.	Total.	Superior.	Subordinate.	Private practitioner.	Total.	Superior.	Subordinate.	Private practitioner.	Total.	
Bengal	21	11	27	59	8	5	19	32	15	11	24	50	7	4	7	18	...	...	...	...	16	10	21	47	7	6	13	26	
Assam	6	5	2	13	3	4	1	8	5	4	2	11	1	...	1	2	...	...	...	...	5	3	2	10	1	3	1	5	
North-Western Provinces and Oudh.	21	25	58	104	7	17	54	78	20	25	54	99	13	9	3	25	...	...	...	...	17	22	44	83	11	19	37	67	
Punjab ...	7	8	9	24	5	8	7	20	6	8	7	21	...	...	1	1	...	...	...	...	7	7	5	19	5	5	6	16	
Central Provinces ...	6	3	2	11	2	3	1	6	6	3	1	10	3	...	1	4	...	...	1	1	6	3	1	10	2	3	...	5	
Madras ...	20	20	6	46	9	9	2	20	13	14	4	31	4	3	3	10	...	...	...	...	12	9	4	25	8	8	2	18	
Bombay ...	13	14	11	38	4	9	6	19	8	13	11	32	3	3	5	11	...	...	...	...	10	10	8	28	2	8	7	17	
Sind	3	6	1	10	2	3	1	6	3	6	1	10	1	2	...	3	...	...	...	...	2	4	1	7	2	3	1	6	
Berar	9	3	2	14	6	3	2	11	8	3	2	13	2	...	...	2	...	...	...	...	8	2	...	10	5	3	...	8	
Ajmere ...	1	1	3	5	1	1	3	5	1	1	3	5	...	...	...	...	...	...	...	...	...	...	3	3	...	...	2	2	
Coorg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Beluchistan ...	...	4	...	4	....	4	...	4	...	4	...	4	...	...	...	...	...	...	...	...	...	2	...	2	...	4	...	4	
TOTAL ...	107	100	121	328	47	66	96	209	85	92	109	286	34	21	21	76	...	...	1	1	83	72	89	244	43	62	69	174	

* NOTE.—For the sake of reference a list of all the witnesses entered in this column will be found in statement II.

No. II.

Statement of non-medical evidence.

Names of provinces.	TOTAL OF WITNESSES.			DELETERIOUS.						NOT DELETERIOUS.						INSANITY.			IMPOTENCY.			Remarks.
				Moderate use.			Excessive use.			Moderate use.			Excessive use.									
	Official.	Non-official.	Total.	Official.	Non official.	Total.	Official.	Non-official.	Total.	Official.	Non-official.	Total.	Official.	Non-official.	Total.	Official.	Non-official.	Total.	Official.	Non-official.	Total.	
Bengal	99	93	192	42	44	86	73	66	139	28	26	54	...	...	...	52	46	98	18	16	34	
Assam	1	1	35	11	14	25	13	16	29	4	4	8	...	...	...	12	13	25	4	6	10	
North-Western Provinces	73	87	160	26	68	94	41	73	114	12	5	17	...	...	...	23	36	59	19	22	41	
Punjab	31	40	71	19	31	50	24	33	57	3	2	5	...	...	...	14	23	37	11	14	25	
Central Provinces ...	34	39	73	9	20	29	15	29	44	8	12	20	...	1	1	1	1	2	6	16	22	
Madras	78	69	149	32	37	69	44	46	90	16	21	37	...	...	...	19	23	42	16	13	29	
Bombay	62	18	80	24	8	32	36	14	50	12	6	18	...	...	...	23	7	30	15	4	19	
Sind	14	11	25	7	8	15	10	10	20	4	3	7	...	...	...	6	2	8	4	5	9	
Berars	17	5	22	8	5	13	11	5	16	...	...	...	...	...	...	7	2	9	3	3	6	
Ajmere	...	2	2	...	...	...	1	...	1	1	...	1	...	...	...	...	...	...	...	...	...	
Coorg	2	...	2	...	1	1	...	1	1	...	...	...	...	...	...	...	1	1	...	1	1	
Beluchistan	3	...	3	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	
TOTAL ...	431	381	812	178	236	414	268	293	561	88	79	167	...	1	1	157	154	311	96	100	196	

45. It is desirable to describe here briefly the views and opinions of the Government of India on the effects of hemp drugs, which have been expressed from time to time.

(1) In 1873 the Government of India after making a full and complete enquiry resolved, in paragraph 15 of resolution No. 3773, dated 17th December 1873, that "there can, however, be no doubt that its habitual use does tend to produce insanity." The Government was so much convinced of its evil effects that they absolutely prohibited the use of ganja in the province of Burma from 1873-74 and desired all other local Governments to discourage the consumption of ganja and bhang by placing restriction on the cultivation, preparation, and sale.

(2) In 1875 on the 29th April the Government of India addressed the Government of Bengal and observed that "nothing should be done to place temptations in the way of the people that can possibly be avoided," and that "His Honor the Lieutenant-Governor may rest assured of receiving the support of the Government of India in any measure that he may adopt for limiting the consumption of ganja and indeed if the use of the drug could be altogether suppressed without the fear of leading to its contraband use, such a course would be justified by its deleterious effects."

(3) In 1877 the Government of Bengal passed a resolution which contains the following conclusions: "the Lieutenant-Governor has himself no doubt that the use of ganja in any form is injurious to the consumer."

(4) In 1879 Mr. A. O. Hume, Member of the Board of Revenue, North-Western Provinces, in his review on the Excise Report of 1879, remarked in paragraph 108 thus: "these drugs are believed to be exceedingly deleterious; the smoking of ganja constantly produces (the Junior Member has had many such cases before him) insanity. The most of our criminals habitually nerve themselves for crime by their use; their use amongst the people as a mass is asserted to have been entirely developed by our system, ..."

(5) In 1892 the Government of India in their letter No. 212, dated 9th August 1892, addressed to Her Majesty's Secretary of State, wrote that "we are inclined to believe that ganja is the most noxious of all intoxicants now commonly used in India," and that "we fully recognize it as our duty to restrict its consumption as far as practicable."

(6) There are hundreds of opinions expressed by the eminent officers of the Government who pronounced the use of ganja to be extremely deleterious. All the official literature on the subject between 1871 and 1891 is full of useful information in support of the above conclusion.

46. It seems also desirable to know the opinions which have been formed in other countries than India about the effects of these drugs, and therefore I give the following quotations—

(1) Report of the Indian Immigrants Commission of 1885-87, chapter II, paragraph 6: "In his report for 1882 the Protector called attention to the increasing habit of smoking it (*Cannabis*) amongst the immigrants; he averred that it was the cause of much sickness, suggesting that the plant should be destroyed and its use prohibited. Employers have been familiar, for many years, with the evils consequent upon its use by their Indian servants; they, the medical officers of circles, and the Protector of immigrants have seen many Indians with their strength and manhood wrecked by the pernicious drug. The opinions of those medical officers are on record. They are unanimous in thinking that the

smoking of hemp is injurious to the constitution of Indians, and the majority testify to the widespread habit of smoking it. To its use they attribute unsteadiness in the performance of work, incapacity for exertion, undermining of nervous power, heart-disease, asthma, retention of urine, night blindness and amaurosis, incoherent speech, mental imbecility, hallucinations, suicides, death. Even in the milder cases an individual under the influence of hemp is listless, his eyes are glassy, suffused, and have a vacant stare, he has no disposition to exert himself, his pulse is soft and weak, he complains of languor and debility. Frequently, men intoxicated by its fumes, become dangerous and are arrested by the police. Homicides are committed by men rendered furious by its toxic properties. We ourselves, when visiting an estate in the Umzinto circle whereon Indians were employed, came upon an Indian, an absentee from work, sitting outside a hut, with his dakkha (which is a synonymous term for ganja—*vide* part I of the above report), pipe on the ground by his side. He muttered to himself, then yelled, spoke rapidly and incoherently, lapsed into silence, then yelled again, and it was impossible to make him understand anything. He was manifestly in a state of dementia induced by dakkha-smoking: he was decidedly dangerous, and the manager was uncertain how to deal with him; finally, the man was left to do as he pleased, the Indians on the estate being afraid to interfere with him, and the manager knowing that the law provided no punishment for his misconduct." Paragraph 7, "We are satisfied, from the documentary and oral evidence before us, (*a*) that the smoking of hemp, whether by itself or in the mixture to which we have referred, is detrimental to the health of Indian immigrants in this colony, (*b*) that the immoderate use of it is highly injurious, (*c*) that the habit of smoking it in excess is widespread, in the Pietermaritzburg circle one-fifth probably of the Indian population smoking it in excess, (*d*) that such immoderate use leads to crime of the most serious nature, (*e*) that it renders the Indian immigrants unfit and unable to perform, with satisfaction to the employer, that work for which he was specially brought to this colony."

(2) Report of the Sanitary Board of Greece appended to the Circular No. 22, dated 27th March 1890, of the Kingdom of Greece (see Abkari, April 1893, page 79).

"Careful scientific observation in warm countries (in Africa, Persia, India, and Turkey) in which the intoxicating qualities of the Indian hemp, and of the haschisch which is manufactured from it in various forms, have long been known, and its use widely prevalent, has long ago proved the disastrous effects produced by the use of haschisch.* From the observations made in India by English doctors (O'Birest, Raleigh, O'Shaugnessy, Esdade) [*sic*], the experiments of Léautano, the observations of Mongieri, the numerous experiments of M. Morean (of Tours), and his observations during his journey in the East, the experimental researches of Von Schroff and Froumüller, and observations of other inquirers, the following safe conclusions are drawn :—

"(*a*) That haschisch disturbs the functions of the systems of digestion and circulation;

"(*b*) That it injures the sense and motive powers;

"(*c*) That it disturbs the cerebral functions;

* NOTE.—Hemp is called haschisch in Arabic, as shown in paragraph 80 of this note.

"(*d*) That the action of haschish manifests itself differently in different persons;

"The action on the circulation of the blood sometimes causes syncope, and the disturbance of the cerebral functions produces mania. The disturbances of the nervous system caused in the animal economy by the use of haschish are peculiar. The phantoms seen by, and the tendencies manifested in those who are intoxicated with haschisch, generally indicate the usual habits of thought and moral character of the intoxicated persons, or the thoughts and passions by which the man was possessed on the day that he became intoxicated, or at the moment in which the symptoms of poisoning began to make themselves manifest. Persons given to the use of haschisch, who become maniacs, are apt to commit all sorts of acts of violence and murders.

"Such being the action of haschisch, it is easy to understand why, among rogues and convicts, quarrels, violence, and murders are of common occurrence, and how dangerous is the use of haschisch by this particular class of people.

"Sometimes the intoxication of haschisch impels the person under its influence to suicide, or the commission of acts forbidden by morality.

"All authors are unanimous, basing their opinion on numerous observations among Eastern peoples, that the long use of haschisch weakens the body and causes atrophy, dulls the mind, and creates hypochondria, idiocy, and mania. Those who indulge in haschisch have a fixed look, without expression, and an idiotic appearance. According to statistical information obtained from lunatic asylums of Cairo and Bengal, the majority of the maniacs and idiots became such from abuse of haschisch.

"It is therefore indisputable that the use of haschisch has a disastrous effect, gradually undermining the health of body and spirit, and becoming a source of evil to society."

(3) Note on immigration from India to Trinidad, 1893, page 43, paragraph 28: "Under the influence of Indian hemp Malayas run 'amock' and kill every one they meet. There is ample evidence that persons strongly under the influence of hemp have, if their passions are aroused, an irresistible inclination to kill, regardless of all consequences. When I was on active service during the Afghan campaign, 1878-81, many furious charges were made on our troops by bodies of 'Ghazis' who, under the influence of overwhelming excitement, rushed madly to the attack and continued to fight against any odds, until they were all killed. These men, I have no doubt, were temporarily mad from hemp."

47. *Mental effects—Insanity.*—In all the 24 asylums of India 1,344 lunatics were admitted in 1892, of which 222 were attributed to ganja, 553 to other causes, and for the remaining 569 the cause was "unknown." A fresh enquiry was directed by the Commission about the cases ascribed to ganja, while the rest were left alone. This procedure appears to me objectionable.

48. Under section 4 of Act XXXIV it will be found that the Magistrates and Civil Surgeons have been made responsible for making enquiries about lunatics. Under section 3 of the same Act the visitors, consisting of at

least one medical officer, are required every month to "see and examine (as far as circumstances will permit) every lunatic therein (*i.e.*, in the asylum) and the order and certificate for the admission of every lunatic admitted since the last visitation of the visitors."

Thus it is clear that the entries are made and examined by the most trustworthy servants of the Crown, and therefore their accuracy cannot be questioned but on a very strong evidence.

49. Though in some cases the descriptive rolls were originally filled by the police, yet they should not be rejected.

First.—Because the Magistrates of the districts who always take necessary precautions before accepting the police reports have accepted them.

Secondly.—There can be no other agency in bringing to light the history of a lunatic than the police, because ganja-smokers are generally men of low caste and of bad character, with whom the high officers cannot be in touch. The habit of ganja-smoking is looked down, and therefore those who use ganja smoke it secretly, trying their best to conceal the fact from their elders and from their society.

Thirdly.—There was no motive, nor has any been assigned, which might have induced the police to make wrong entries. Therefore their entries should not be rejected. Surgeon-Lieutenant-Colonel O'Brien, of Benares, witness No. 80, North-Western Provinces, says, "when ganja is assigned, the man was probably a notorious ganja-smoker. The enquiry may be conducted by a chaprasi, yet he might be right in that." Surgeon-Major J. W. Macnamara, witness No. 20, Assam, says (in oral) : "My idea of the reliability of the information rests entirely on the fact that the police have no inducement to report falsely. On the whole, then, I think that when the police ascribe insanity to ganja it may be fairly accepted as reliable." Surgeon-Major K. R. Kirtikar, witness No. 73, Bombay, 16 years' service, says in oral 46: "If the police tell me the cause, I send myself for the relations who have given the police the information and examine them myself. I make then my entry as to cause. If I cannot get the relatives I show the cause 'unknown.' If the police knew personally the habits of the man, then I would accept their statements, but not otherwise. If the police give me information as to cause which is the result of enquiry, I reject that; for in such scientific enquiries I consider it necessary to have information at first hand."

Fourthly.—If there was any motive for the police to show wrong causes in the descriptive-rolls, there could not have been so many cases as 569, which are entered in column 29 of unknown cases in Statement VII for 1892. This shows that the enquiry was made carefully, and that the cause of ganja was attributed only when it was proved to be so.

Fifthly.—There are certain marks and signs by which a ganja or charas smoker can be easily distinguished, such as the redness of eyes, a red mark on the hand and thumb, and the general appearance of the smoker to which the medical officers must have paid some attention before accepting a lunatic as one affected

by ganja. Surgeon-Lieutenant-Colonel A. Crombie, witness No. 104, Bengal, says: "Besides this there is the mark on the hand and thumb of the ganja-smoker which, if present, immediately distinguishes him as a habitual smoker." Surgeon-Lieutenant-Colonel Meadows, witness No. 101, Bengal: "I think the general appearance is more typical than anything else—the appearance of the eyes and his excitable irritational manner. With these symptoms I think I should be able to tell a case as one of hemp drug insanity even without history of the use of the drug."

50. As regards para. 517 of the Report, I would remark that the attention of the Indian newspapers and of the House of Commons, the Secretary of State, and of the Government of India was drawn in 1891 to the fact that the lunatic asylums of India were filled by the ganja insanes. Accordingly an official enquiry was instituted lasting from 6th August 1891 to 9th August 1892. Under these circumstances, it cannot be said that the responsible officers did not take sufficient care in having the descriptive-rolls and asylum registers filled with accuracy. Surgeon-Lieutenant-Colonel Meadows, witness No. 101, Bengal, says in his oral: "We do not now accept the cause thus assigned so readily as we used to do. Since attention has been so much attracted to ganja during last year we are much more careful."

51. In 1893 this Commission was appointed, and it should be presumed that the entries of 1893 were made with all possible care. The following table shows the figures for 1892 and 1893 taken from statement VII. It will be seen that the figures of 1893 fully support those of 1892.

Province.	Total of admissions.		Cases attributed to hemp drugs.		Percentage.		Remarks.
	1892.	1893.	1892.	1893.	1892.	1893.	
Bengal	186	205	53	56	28·4	27·3	
Assam	43	35	13	7	30·2	20·0	
North-Western Provinces...	284	271	52	72	18·3	26·5	
Punjab	132	122	22	28	16·2	22·9	
Central Provinces ...	62	78	13	17	20·9	21·7	
Madras	245	211	19	25	7·7	11·8	
Bombay	290	275	47	31	16·2	11·2	
Burma	102	69	3	2	2·9	2·8	
Total ...	1,344	1,266	222	238	16·5	18·7	

52. The following is an abstract of statement VII for the last 20 years taken from the Lunatic Asylum Report of Bengal for the year 1892, which also corroborates the entries of 1892. The percentages given in this statement by the Government are upon the total admissions of the year; but perhaps it would

have been better if these percentages had been based on the number of those cases only the cause of whom was known as discussed in paragraph 55 of this note:—

Year.	Number of admissions and re-admissions.	Number alleged to have been caused by			Percentage of column 3 on column 2.	Percentage of column 4 on column 2.	Percentage of column 5 on column 2.
		Ganja and bhang (Statement VII).	Opium (Statement VII).	Spirits (Statement VII).			
1	2	3	4	5	6	7	8
1873	514	171	6	22	33·2	1·1	4·2
1874	501	215	1	16	42·9	·19	3·1
1875	418	176	2	16	42·1	·47	3·8
1876	366	143	2	17	39·	·54	4·8
1877	285	107	3	13	37·5	1·05	4·5
1878	227	90	3	5	39·6	1·3	2·2
1879	196	61	2	6	31·1	1·02	3·
1880	216	65	...	10	30·	...	4·6
1881	213	69	2	13	32·3	·93	6·1
1882	188	66	...	10	35·1	...	5·3
1883	232	76	1	18	32·7	·43	7·7
1884	232	63	...	12	27·1	...	5·1
1885	232	59	1	11	25·4	·43	4·7
1886	218	57	...	7	26·1	...	3·2
1887	181	54	...	10	29·8	...	5·5
1888	238	63	1	11	26·4	·42	4·6
1889	247	69	1	19	27·9	·4	7·6
1890	221	56	2	7	25·3	·9	3·1
1891	213	54	2	7	25·3	·94	3·2
1892	186	53	1	10	28·4	·53	5·3
1893	205	56	...	...	27·3	...	...

53. A large proportion of the 222 ganja cases of 1892 consists of lunatics charged with crime, who were acquitted on the ground of insanity. Such insanes are admitted in the asylums, and the cause is generally taken from the judgment of the court as stated by Dr. McKay, witness No. 36, Central Provinces "In criminal cases the cause is taken generally from the judgment of the court." Dr. Crombie, witness No. 104, Bengal, says, "Besides (the descriptive-roll) we have (but only in criminal cases) the judgment in which the

point is frequently raised and discussed as part of the defence." It is true, as argued in paragraph 518 of the Commission's Report, that it was unnecessary for the court to make special enquiry as to the cause of insanity, but it was quite natural that when the court acquitted an accused on the ground of insanity, it must have made a full enquiry into his character and habits of life and satisfied itself as to the cause of insanity before passing final orders. Besides that, if ganja would have been wrongly given as the cause, most probably the complainant in the case would have been the first to make objection to it. In Bengal out of 53 ganja-admissions in 1892, there were 22 criminal lunatics, but only 21 (criminal and non-criminal) cases out of 53 have been accepted. This shows that some of the criminal cases also have not been accepted.

54. The fresh enquiry is not satisfactory on the following grounds:—

(1) In 1892 the number of admissions in all the asylums was 1,344, out of which 222 were ganja cases, 553 attributed to other causes, and 569 were entered as unknown. The fresh enquiry has been confined to the 222 cases and is therefore defective. When out of 222 cases 124 have been found due to causes other than ganja and consequently rejected, it can be contended on the same ground that the remaining 1,122 cases, for which other causes than ganja have been attributed in statement VII, contain a good many ganja cases. The object of the Commission was to know the exact number of ganja cases admitted in 1892, and the actual percentage could have only then been ascertained had the present fresh enquiry been extended to all the admissions of 1892.

(2) This enquiry has been made by the same agency as before, and not by any member of the Commission as would appear from paragraph 521 of the Report. Therefore, if the former enquiry is questioned, the present one cannot also be relied upon. The Commission themselves have made the following observations in paragraph 526 of the Report:—"The method of enquiry has not been satisfactory in regard to all the cases referred for local enquiry." "In some it will be observed even this further inquiry has been left to the police." I for one would say that this second enquiry, if it has resulted in anything, has thrown still greater doubt on the subject, for while the former reports were made by the police unfettered with any bias, now they created for themselves that Government is inclined to reduce the number of ganja lunatics and so they might have done not a little to understate the true number. This remark of mine will, I hope, be fully admitted by all officers who have had some experience in India.

(3) Statement No. VI shows the types of insanity as diagnosed by the medical officers of the asylums, who are personally responsible for the accuracy of entries in the above statement, as Dr. DeFabeck, Surgeon-General with the Government of Madras, witness No. 83, says: "Diagnosis of hemp drug insanity does not depend solely on history. I consider that it is the duty of the medical officer to observe the case and base his diagnosis on the facts he observes and those he may elicit from the insane in lucid intervals." The total number of diagnosed cases of toxic insanity is 157, but the cases accepted by the Commission fall short of this figure also. The following figures are taken for the ganja cases, and they prove that the number of accepted cases in the Report is apparently wrong. The number of ganja cases as diagnosed in statement VI in 1892 is 157, but only 98 cases are accepted.

Name of province.	Total admissions in 1892.	Cases attributed to hemp drugs in 1892 in statement VII.	Cases diagnosed as due to hemp drugs in statement VI in 1892.	Cases accepted by the Commission.	Percentage.	
					Column 5 to 2.	Column 4 to 2.
1	2	3	4	5	6	7
Bengal	186	53	40	20	10·7	21·5
Assam	43	13	13	3	6·9	30·2
North-Western Provinces	284	52	30	22	7·7	10·5
Punjab	132	22	23	14	10·6	17·4
Central Provinces ...	62	13	2	5	8·0	3·2
Madras	245	19	2	7	2·8	·8
Bombay	290	47	45	24	8·2	15·5
Burma	102	3	2	3	2·9	1·9
TOTAL ...	1,344	222	157	98	7·3	11·6

Note.—Here a question may arise that, according to statement VII, the total admissions of ganja cases are 222, while in statement VI only 157 cases are shown to have been diagnosed as ganja cases, and that in view of so vast a difference, if the latter statement is taken as correct, the former must be wrong. But the fact is that these 157 cases our of the 222 cases are those entered in statement VI in the column of toxic insanity, while the rest are entered in the column of mania, etc., as will be seen from paragraph 527 of the Report, where out of 98 accepted cases only 39 are shown as entered in statement VI in the column of toxic insanity and the others in mania, etc.

(4) As will be seen from paragraph 521 of the Report, that out of 222 ganja cases 124 have been rejected. In my opinion many of them have been rejected on insufficient grounds. I pointed out some such cases to my learned colleagues Mr. Fraser and Dr. Warden, who were in charge of this part of the enquiry, but they were not formally discussed in any meeting of the Commission when the report was under discussion. There is a case in which the lunatic when he became sane admitted the use of ganja in presence of Dr. Meadows, Superintendent of Berhampur Asylum, but still the case has been rejected. In another case the lunatic's own brother gave the information that the lunatic was addicted to ganja. (See Lunatic Asylum, Lucknow, case No. 1). In a third case a lunatic's brother-in-law stated that the lunatic was addicted to ganja, and the lunatic was made over to him. (See Lunatic Asylum, Agra, case No. 10). Many cases have been rejected which were attributed to hemp drugs by the Superintendents of Asylums even after the fresh enquiry. The Superintendents had all the papers of the lunatic's past history before them, and I think they were in a better position than the Commission to observe the case and form an opinion as to the cause of insanity.

(5) The fresh enquiry produced great suspicion in the mind of the public, and the people apparently avoided giving true facts of the lunatics to the enquiring officers, lest they themselves might be thrown into some difficulties.

(6) Out of 1,344 admissions of 1892 the cause of insanity in statement VII was shown for 775 cases only, and in 569 the cause of insanity was "unknown." It cannot be denied that among this number of "unknown" cases there must be some ganja cases which were not ascertained; therefore the percentage has been wrongly taken on total admissions. It should have been taken on the number of known cases only, *i.e.*, on 775.

(7) Consumption of ganja is prohibited in Burma, and it was quite wrong to take the admissions of Burma Asylum into account, as it materially affects the totals and percentages.

55. In my opinion, though there might be a few mistakes, yet on the whole it would be fair to accept the entries of statement VII as correct for the basis of forming an opinion. In the following table I have therefore given the full number of 1892 and calculated the percentages on the number of known cases only:—

Provinces.	Admissions.			Cases attributed to hemp drugs.	Cases attributed to liquor.	Cases attributed to opium.	Percentages.		
	Cause "known."	Cause "unknown."	Total.				Column 5 to column 2.	Column 6 to column 2.	Column 7 to column 2.
1	2	3	4	5	6	7	8	9	10
Bengal	115	71	186	53	10	1	46·0	8·6	·08
Assam	19	24	43	13	3	1	68·4	15·7	5·2
North-Western Provinces	127	157	284	52	11	6	40·9	8·6	4·7
Punjab	63	69	132	22	2	1	34·9	3·1	1·5
Central Provinces ...	30	32	62	13	...	...	43·3	...	...
Madras	204	41	245	19	7	5	9·3	3·4	2·45
Bombay	184	106	290	47	21	1	25·5	11·4	·54
TOTAL ...	742	500	1,242	219	54	15	25·5	7·2	2·0
Burma	33	69	102	3	14	1	...	...	...
GRAND TOTAL ...	775	569	1,344	222	68	16	...	...	...

56. A perusal of Lunatic Asylum Reports for 1892 and of the previous years, clearly shows that—

(1) The percentage of ganja lunatics is extremely high when compared with those caused by other intoxicants used in India, as will be seen from the statement in paragraph 55 and that of 20 years past in paragraph 52 of this note.

(2) It is higher than the percentage of insanity due to liquor in England, which is only 19·2 per cent.

(3) Ganja and charas are more deleterious than liquor or opium, etc.

(4) There is a close connection between crime and ganja-smoking. In Bengal, where ganja is largely used, it is found that 41 per cent. of ganja lunatics are criminals; the table of this will be found in paragraph 63 of this note, where crime is dealt with.

(5) The percentage of ganja lunatics is much higher in those provinces where its cultivation is extensive, and consumption greater, than the percentage in other provinces, like Madras, Bombay, etc., where it is less cultivated and used, or in Burma, where it is totally prohibited.

57. *Census and insanity.*—It will be evident from the statement given below, that in 1892 the whole population of lunatic asylums was 5,581, out of which 837 were due to ganja. The Census Report of 1891, Volume II, page 59, shows that the whole number of insanes in India was 74,470. If the rate of ganja lunatics to the population in the lunatic asylums be applied to the total number of insanes in India it would be found that the insanity of about 11,168 persons in India is due to the use of hemp drugs. Again out of 5,581, the total population of all the asylums, 222 new cases due to hemp drugs were admitted in 1892, and by this calculation about 2,962 persons annually turn insane by the use of hemp drugs.

Population of lunatic asylums.

Province.	Total population.			Cases due to hemp drugs.		
	Remaining at the end of the year 1891.	Admissions of 1892.	Total.	Remaining at the end of the year 1891.	Admissions of 1892.	Total.
Bengal	963	186	1,149	174	53	227
Assam	111	43	154	21	13	34
North-Western Provinces ...	1,007	284	1,291	154	51	205
Punjab	340	132	472	60	23	83
Central Provinces	261	62	323	36	13	49
Madras	592	245	837	44	19	63
Bombay	709	290	999	109	47	156
Burma	254	102	356	17	3	20
Total ...	4,237	1,344	5,581	615	222	837

58. The above conclusions are corroborated by the evidence of witnesses before the Commission, as will be seen from the statements in paragraph 44 of this note, where 244 medical and 311 non-medical witnesses pronounce the use of ganja and charas to be a direct or indirect cause (or, in scientific language, predisposing or exciting cause) of insanity. I have not ventured to take up the scientific view of the question and leave it for medical experts.

59. For the purpose of ascertaining the effects of the hemp drugs, the medical evidence deserves special attention, and I would therefore recommend to read it *in extenso* as appended to the Report. Its analysis is given in paragraph 44 of this note and a list of those witnesses who said that even the moderate use of the drugs is deleterious will be found in statement II of this note. For brevity sake I have given a few quotations of Bengal and Punjab witnesses only as typical instances in statement III; in the former province *ganja* and in the latter *charas* being chiefly used. As to the comparative value of the evidence of medical men of different grades paragraph 494 of the Report should be read.

60. *Moral effects.*—It is concluded in paragraph 552 of the report that the hemp drug's "moderate use produces no moral injury whatever," and that "there is little or no connection between the use of hemp drugs and crime."

I do not share in the above opinion, and hold on the contrary that the use of ganja and charas causes distress to the consumer and the members of his family and has a direct or indirect connection with crime and bad habits.

61. *Distress.*—It has been admitted that the consumers are chiefly the labouring classes and the beggars. The average of wages of the former in Bengal is 4 annas a day, while the latter are only a burden on the society.

It has been shown in paragraph 8 that the average dose of a moderate consumer is one-fourth tola a day, and for an excessive one tola a day, which would cost in Bengal (at the rate of Rs. 20 a seer as accepted in the Report) one anna to the moderate, and four annas to the excessive consumer. Now it can be better imagined than described what should be the distress of the family of the consumer who spends not less than one-fourth of his income on this drug. Whether the consumer can provide food for himself, his wife, and children or not, but he is sure to provide his stimulant by legal or illegal means. Moreover, almost all the witnesses unanimously pronounce that the use of these drugs requires plenty of milk and rich food to modify their evil effects. But there is scarcely one per cent. of the consumers who can provide to feed himself properly.

In the Excise Report of 1891, paragraph 12, the Hon'ble Mr. McKay, Member of the Board of Revenue, N.-W. P., remarked that "the consumption of hemp drugs does not depend so much upon season as it does in the case of liquor. Drugs are much cheaper than liquor, and a drug consumer would reduce his food sooner than do without his accustomed stimulant."

62. *Crime.*—It is a remarkable fact that as the number of ganja smokers in the lunatic asylums of Bengal is as high as 46·5 per cent. of the admissions in 1892 (as mentioned in paragraph 55 of this note), the number of criminals in the above ganja cases is not less than 41·5 per cent. This fact alone clearly proves that the use of ganja produces insanity of such a type as mostly leads its victims to crime. This will be seen from the following statement which gives figures for the last 5 years for the Province of Bengal:—

Year.	No. of cases attributed to hemp drugs in Statement VII.			Percentage column 2 to column 4.	Remarks.
	Criminals.	Non-criminals.	Total.		
1	2	3	4	5	6
1889 ...	25	44	69	36·2	
1890 ...	18	48	66	27·2	
1891 ...	14	40	54	25·9	
1892 ...	22	31	53	41·5	
1893 ...	27	29	56	48·2	
Total ...	106	192	298	35·5	

63. When I take into consideration the cause of insanity of all the criminals admitted in the lunatic asylums, I find that even among them the percentage of those criminals whose insanity was due to the use of hemp drugs is as high as 41·0

per cent. of the known cases. As the reports of the lunatic asylums of Bengal are more complete than those of other provinces, and the consumption of ganja is greater there, I give the following statement for Bengal for the last 5 years. The lunatic asylum reports of other provinces cannot be relied upon, because sometimes criminal lunatics are not sent to the asylums for want of accommodation, but to central jails, as is the case in the North-Western Provinces.

Extract from Statement VII.

Year.	Criminal lunatics admitted.			Criminal lunatics attributed to			Percentage.			Remarks.
	Cause "known."	Cause "unknown."	Total.	Hemp drugs.	Opium.	Spirits.	Column 5 to column 2.	Column 6 to column 2.	Column 7 to column 2.	
1	2	3	4	5	6	7	8	9	10	11
1889 ...	59	49	108	25	...	6	42·4	....	10·2	
1890 ...	45	54	99	18	2	1	40·0	4·2	2·2	
1891 ...	41	50	91	14	2	3	34·1	4·9	7·3	
1892 ...	55	43	98	22	1	6	40·0	1·8	10·9	
1893 ...	58	45	103	27	1	...	46·6	1·7	...	
TOTAL ...	258	241	499	106	6	16	41·09	2·3	6·2	

64. Most of the witnesses pronounce a direct or indirect connection between the hemp drugs and crime, which can be ascertained on referring to the evidence of witnesses in reply to questions 51 to 55. I give a few quotations of some eminent witnesses who have had opportunities of observing the matter under discussion in statement IV.

Hemp drugs compared with alcohol.

65. In paragraph 490 of the Report an allusion is made to the comparison of evil effects between the hemp drugs and liquor, but no definite opinion has been expressed therein. I believe there can be no doubt that ganja, charas, and liquor are all deleterious. The difference lies in degree and quality of the intoxication. It is to be noticed that there are many natives of social position, learning, and intellect, who either openly or secretly use liquors, but their brains are not spoiled. Almost all the European gentlemen in this country use liquor, but the superiority of their intellect and learning can in no way be doubted. On the contrary, not a single man of learning and position will be found among those addicted to the use of ganja and charas. This clearly shows that the use of these drugs should have more injurious effects upon the brain than alcohol. Besides this liquor is a kind of tonic, and gives strength to the body, while ganja and charas can give no such strength. It is observed that alcohol produces its bad effects only when used in excess, while the smoking of hemp drugs acts upon the brain even when used in the smallest dose.

The percentages of insanity caused by liquor, opium and hemp drugs in Bengal are given in a statement in paragraph 52 of this note for the last 20 years,

and they clearly show that the hemp drugs are the most potent factors of all intoxicants in producing insanity. The following table shows the percentages as accepted in paragraph 524 of the Report and they also confirm this view.

Province.	Percentages as shown in paragraph 524 of the Report.	
	Hemp Drugs.	Spirits.
Bengal	10·7	2·1
Assam	6·9	6·9
North-Western Provinces	7·7	3·5
Punjab	10·6	1·5
Central Provinces	8·0	...
Madras	2·8	2·8
Bombay	8·2	7·2
TOTAL ...	7·8	3·4

The following quotations are also noteworthy :—

(1) North-Western Provinces, witness No. 6, Mr. Stoker, Excise Commissioner, oral 44, "I put these drugs above liquor and opium in their injurious tendencies."

(2) North-Western Provinces, No. 8, Mr. H. Fraser, Collector and Magistrate, "I wish it were, as I believe alcohol to be very harmless in comparison." "These stimulants (spirits and opium) as far as I have seen are exceedingly harmless or do exceedingly little harm, and I think the greatest watch fulness is necessary to prevent excessive cost of these articles driving consumers to the use of the cheapest hemp drug."

(3) North-Western Provinces, No. 34, John Cockburn, Sub-Deputy Opium Agent. "All smoking is in my opinion injurious, and the use of ganja and charas in that way is not comparable with the drinking of liquor."

(4) North-Western Provinces, No. 16, P. Allen, Collector. "In my opinion excessive consumption of all hemp drugs is more injurious than of alcohol, and if I considered that consumption was on the increase I should lighten taxation on liquor."

Oral—"My experience is that alcohol is not productive of much harm in this district."

(5) Bombay, No. 1, Honourable T. D. Mackenzie, Commissioner of Opium, &c.—"I do not think the labouring classes who use the drugs would take to dhatura. They would rather take to alcohol. I think this would probably do less harm; the liquor being toddy or

spirit of good quality such as is supplied from central distilleries, than the hemp drugs."

(6) Bombay, No. 38, W. Almon, Assistant Collector, Abkari, "Generally then my impression is that there are more wrecks from ganja than liquor in proportion to the number of consumers, but not actually more."

66. *Native States.*—A number of question papers were supplied to selected persons in the Native States and 125 replies were received. It was unanimously resolved by the Commission that the replies of witnesses from the British territory should be appended to the Report, but as to the evidence of the Native States it was proposed that they should not be so dealt with. After some written and oral discussions all the four official members voted for the proposal and all the three non-official members against it. Therefore the evidence from the Native States has been omitted from the Report. Evidence from Native States and Army.

The area and population of the Native States are so considerable that they should not be lost sight of. Native State evidence, generally speaking, corroborates that from the British territory, and very strongly shows that the use of ganja and charas is very deleterious, that it is much in disrepute, that it is not connected with any social or religious custom, that prohibition is desirable and feasible, and that the English system of excise administration has been and is likely to be followed in the Native States. An analysis of the opinion of medical men will be seen from the following table:—

—	Total Number of Medical Witnesses.				DELETERIOUS.								NOT DELETERIOUS.								Insanity.				Impotency.				Remarks.
					Moderate.				Excessive.				Moderate.				Excessive.												
	Superior.	Subordinate.	Private Practitioner.	Total.	Superior.	Subordinate.	Private Practitioner.	Total.	Superior.	Subordinate.	Private Practitioner.	Total.	Superior.	Subordinate.	Private Practitioner.	Total.	Superior.	Subordinate.	Private Practitioner.	Total.	Superior.	Subordinate.	Private Practitioner.	Total.	Superior.	Subordinate.	Private Practitioner.	Total.	
Native States...	33	11	10	54	20	9	7	36	28	11	9	48	6	3	2	11	...	...	...	...	15	8	4	27	15	5	5	25	

Some of the witnesses are themselves Chiefs and others are responsible officers and eminent physicians of the States. I give below a few extracts to show the tendency of the evidence in a general way.

Hyderabad, witness No. 9.

T. Streenivasa Rao, Hakeem, His Highness the Nizam's Civil Medical Department:—"As they advance in age, moderate habitual consumers become victims to the noxious effect of hemp plant morally, mentally, and physically. It impairs the constitution, injures digestion, and causes anaorexia. Smoking ganja has reduced many strong men to the lowest ebb. I mean moderate smoking. Bhang and ganja induce habits of immorality or debauchery when the consumer

is still in good health. Many authors in *Unani* medicine, such as Boo Ali Sena, Ibenni Byttar, Jali Noos, Mahomed Hussun Sherazi, and others denounce the habitual use of hemp plant as aphrodisiac in one voice, as its long continued use dries up seminal fluid, and the consumer becomes impotent."

Bhawulpur, witness No. 1.

Jind Wadda Khan, Finance Minister:—"The use of intoxicating drugs is prohibited by religious injunctions. Similarly persons of every class regard its use as unlawful."

Laharu, witness No. 1.

Nawab Ameeruddin Ahmud, Khan Bahadur, C.I.E., Chief of Laharu:—"Whatever answers I have given to the above questions, they are the focus of my information, enquiries, and observations, and now the gist of my opinion is that the use of these three drugs and liquor has very badly affected the morals, health, and the finances of the public of this country, the noblemen of which have been rendered incapable of discharging their duties on account of excessive drinking. Thousands have been doomed to death by this evil; and it is not only the gentry, but also the lower and the middle classes who have been ruined by the use of these intoxicants. I am of opinion that the matter of these intoxicants requires serious consideration."

Nabha, witness No. 1.

Sayad Wazir Ali and L. Deva Singh, officials of the Nabha State:—"In this State bhang alone is sold for medicinal use, etc. The use of ganja and charas being prohibited, no leases are given."

Rajputana, witness No. 2.

W. H. Neilson, M. B., Surgeon-Captain, Medical Officer, Erinpura Irregular Force:—"The moderate use of bhang produces no noxious effects. The even moderate use of ganja and charas has a most deteriorating effect physically, mentally, morally on the subject of the habit."

Bhor (Bombay), witness No. 1.

Chief of Bhor (Bombay):—"It is feasible to prohibit the use of any or all of these drugs if its non-cultivation be enforced. The prohibition would not occasion any serious discontent among the consumers, nor would the discontent, if any, amount to any political danger. The prohibition would not necessitate the use of any other drugs."

Mysore, witness No. 1.

Brigade-Surgeon-Lieutenant-Colonel I. J. McGann, Senior Surgeon and Sanitary Commissioner with the Government of Mysore:—"Habitual moderate use of ganja affects the system physically, mentally, and morally, produces emaciation, impairs appetite, and sometimes dysentery or bronchitis. It impairs the moral sense to a certain extent, induces laziness, and tends to produce insanity. It excites insanity as well as predisposes to it."

67. *Army.*—A separate set of selected questions was framed for the Native and British Army by the Commission and, after the permission of His Excellency the Commander-in-Chief, circulated for answers; 274 statements were received.

The Commanding Officers were instructed by the Commission thus:—"It is suggested that Commanding Officers should, in replying to these questions, freely consult the medical officers in charge and native commissioned and non-commissioned officers. Questions 45 and 46 should be answered by medical officers."

Just as it was the case about the evidence of the Native States mentioned in para. 66 of this Note, it was proposed that the Army Evidence also should be rejected and not appended to the Report. All the official members and Kunwar Hurnam Singh Ahluwalia voted for it, and thus by a majority of 5 to 2 members the motion was carried out. In para. 409 of the Report some allusion is made to the evidence of Army as to the extent of use. The following sentences are quoted from the above paragraph:—"Several inquiring officers report that their men will not admit the use of the hemp drugs, though it is certain that they are taken to some extent, and in many cases there are special reasons for reticence in addition to the disrepute attaching to the habit in native society generally. In some regiments the use of the drug is directly prohibited and in others the Commanding Officers, though they may not have gone to this length, regard the consumers with distrust. It must be the case also that in some regiments the consumers are held in greater disrepute among their comrades than in others." It is clear from the above that the use of hemp drugs is disreputable in the Army as badly as elsewhere, and that their officers were so much convinced of their bad effects upon the physical, mental, or social condition of their soldiers that they directly or indirectly prohibited their use.

In the Report no notice was taken of the opinions expressed in the Army Evidence about the effect of the hemp drugs; but I think that this opinion has a particular advantage, and should be preferred to that of other witnesses. The Army men are always healthy and strong; have sufficient means to properly feed and clothe themselves; have got healthy accommodations to live in and agreeable exercise to undergo. They are under close observation of their officers and cannot conceal any fact from them.

The answers to the question papers received from each regiment, were generally drawn up after consultation with the medical officers. I believe the opinion of the Army Medical officers about the effects of the drugs should have much weight: out of 274 Army witnesses, some are silent on the question of effects, but most of them have expressed an opinion, and I find from examination that 174 of them pronounce the use of the hemp drugs to be extremely deleterious.

68. Before discussing the question of the policy in regard to the hemp drugs, to be adopted in future, it seems desirable to describe here briefly the past history of the excise administration in India, and therefore I begin it from the Hindu period. Prohibition.

69. Manu Smriti or the Institutes of Manu is the greatest authority on Hindu Law. In Chapter VII are enumerated the different taxes and revenue which alone the king is authorized to collect. A tax on an intoxicant is not mentioned therein, and therefore it is not legal for a king to levy a tax on these intoxicants. Besides Manu Smriti, I have consulted almost all the other standard Smritis, and find that all of them follow the principle laid down by Manu, as described above.

(*a*) The manufacture and sale of spirituous liquors were expressly prohibited, and it was ordained "that distillers and sellers should be banished from the realm of a king as they are secret thieves and harass the subject by their ill deeds." (See Chapter IX, Sloke 225 and 226 of Manu Smriti).

(*b*) In view of these orders for spirituous liquors, which are not more deleterious than ganja and charas (*vide* paragraph 65 of this note), it must be concluded that the use and sale of these drugs are equally if not more stringently prohibited.

70. As to the Mahomedan kings of India, in Gladwin's translation of the Ayeen Akbari, paragraphs 288-289, there is a list of taxes which were remitted by the great Moghul, *Akber*, among which were taxes on salt and spirituous liquors.

(*a*) Even such a king as *Aurungzeb* did not commit himself to the taxing of intoxicants. On one occasion his grandson proposed to tax the palm juice, *i.e.*, *tari*, which was used as an intoxicant, and asked the permission of his grandfather to do so. The king's reply is found in his own letter No. 90 in his letters-book called "Ruqaat Alumgeri." Its translation stands thus:—

"Though the establishment of a mart for selling tari (palm juice) may lead to the collection of revenue, yet it is impossible to sanction such revenue. I cannot understand what a dishonest Mufti (legal adviser) declared it legal to do so. You must know that such ill-advisers are your enemies in this world and the next. You must thank Almighty God who has put you in possession of three provinces, which are very rich and give much revenue, and in which every thing is abundant and cheap. You should know that the good-will of the subjects is the only wealth either in this world or in the next."

(*b*) Following the same principle of the Mahomedan law, the Mahomedan prince of Kathyawar has stopped the practice of farming out contracts for spirits on the ground that it is opposed to the tenets of the Mahomedan religion to derive any revenue whatsoever by letting out contracts for liquors (see Abkari for July 1893, page 107).

71. It appears that up to the year 1790 the taxes on spirituous liquors were collected by the zemindars, and that "complaints were then rife about the spread of drunkenness among the lower classes of the people."

These complaints apparently decided the Government upon the resumption of the sayer on spirituous liquors. Accordingly, "on the 19th April 1790, the Government resolved on *moral grounds* to resume the Abkari sayer without reference to other duties." (Report of the Spirit Commission of Bengal, 1884, pages 8 and 9).

The above facts are corroborated by the Excise Commissioner of Bengal in his memorandum of the 27th November 1893 prepared for the Hemp Drugs Commission. He says, "It will appear from paragraph 1, section 2 of Harrington's Analysis, volume 3rd, 1817, that with a view to check immoderate consumption, and at the same time to augment the public revenue, it was judged expedient to continue and extend the duties levied on liquors and drugs when the sayer collections were resumed from the landholders in the year 1790."

72. On the 16th February 1798, the Board of Revenue suggested that a duty be levied on the sale and consumption of (1) madak, (2) ganja, (3) subzi, (4) majoon, (5) banker, (6) charas.

On 2nd March 1798 the President (the Governor-General in Council) replied to the Board as follows:—"Some of the articles enumerated in your letter, we have reason to believe, are of so noxious a quality and produce a species of intoxication so extremely violent, that they cannot be used without imminent danger to the individual as well as to the public, who may be exposed to the effects of the temporary insanity frequently excited by the use of these drugs." "We are of opinion that the vend of any drugs of this description should be altogether prohibited, and we desire, therefore, that, after having made an enquiry with a view to ascertain more particularly the nature and effects of them you will prepare and submit to us a regulation for this purpose, as well as for establishing such duties as may appear to you proper on the sale of such other drugs as may be used without the same pernicious effects."

The Board of Revenue made enquiries under the above order and arrived at the conclusion that tobacco, opium, ganja, bhang or subzi, banker and toddy were "not for the most part represented as producing any very violent or dangerous effects of intoxication, except when taken to excess," and that "they appear to be useful either in medicine or otherwise." For these reasons they recommended on the 29th of May 1798 that the sale of none of them should be altogether prohibited, but stated what appeared to them the best means of restraining the use of them and improving the revenue by the imposition of such taxes as were best adapted to the nature of the case.

Accordingly unlicensed sale of intoxicating drugs was prohibited, and daily rates of duty on the sale of intoxicating drugs were levied by Regulation VI of 1800. From 1853 the daily tax was abolished and a duty at 1 rupee per sér on ganja and charas was imposed. In 1860 a fixed fee of Rs. 4 per maund was prescribed for each ganja license in addition to the above fixed duty.

73. In 1876 the present system of annually selling the retail license by auction was introduced.

74. In 1871 the Government of India thought it desirable to make an enquiry into the effects of the use or abuse of the hemp drugs, and on the 10th October 1871 all the Local Governments were requested to make the above enquiry. On the 17th December 1873 the Government of India, after receiving the replies from the Local Governments, resolved that, "with the exceptions of Burma and the Central Provinces, the Local Governments are not in favor of altering existing arrangements. His Excellency in Council, however, trusts that the various Local Governments and Administrations will endeavour, wherever it may be possible, to discourage the consumption of ganja and bhang by placing restrictions on their cultivation, preparation, and retail, and imposing on their use as high rate of duty as can be levied without inducing illicit practices."

As suggested by Sir Ashley Eden, the Chief Commissioner of Burma, the cultivation and consumption of ganja was absolutely prohibited in Burma from the beginning of 1873.

75. On the 29th April 1875 the Government of India addressed the Government of Bengal, and observed that "nothing should be done to place temptations in the way of the people that can possibly be avoided," and it was directed in paragraph 3 of the above letter "that His Honor the Lieutenant-Governor may rest assured of receiving the support of the Government of India in any measure that he may adopt for limiting the consumption of ganja, and indeed if the use of the drugs could be altogether suppressed without the fear of leading to its contraband use, such a course would be justified by its deleterious effects."

76. In August 1891, the Secretary of State, on a question put in the House of Commons, asked the Government of India to express their views on the effects of ganja and whether they proposed to take any further steps for restricting its consumption. The Government of India replied on the 9th August 1892 and stated in paragraph 3, "We are inclined to believe that ganja is the most noxious of all intoxicants now commonly used in India," and in paragraph 5 "that although we consider it impracticable to enforce the absolute prohibition of the use of ganja, we fully recognize it as our duty to restrict its consumption as far as practicable." They did not approve of the prohibition of ganja (1) because the consumers would be induced to use still more noxious drugs like dhatura, &c., (2) because the existence of hemp plants all over India made the prohibition of ganja impracticable.

77. It will be seen from the above facts that excise revenue was unknown in this country under the native system of government, and that the British Government originally took out of the hands of zemindars the excise administration with the main object of restricting the use of intoxicants, and that the highest authorities issued repeated orders to restrict or even prohibit their use, and to gain the above object rates of direct and indirect taxation have been immensely increased from time to time.

78. Having shown in paragraph 11-18 of the note that the present system of taxing the drugs does not check their use and the gradual rise in the fixed duty only leads people slowly but surely to accustom themselves to the higher burden and to smuggling and illicit gain of the vendors, who every year try to outbid their competitors at the annual auction for licenses, I cannot but recommend that Government should condemn their use by withdrawing its countenance and forbidding cultivation of hemp plant for ganja, manufacture of ganja, importation of charas across the frontiers, and the recognized sale of ganja and charas. In short my recommendations are the same as those made by the Indian Immigrants Commission of 1885-87 in their report, paragraph 8. "On recommending the prohibition of hemp, it may be found difficult to prevent in toto the use of hemp, we are convinced, however, that the knowledge that its use is forbidden by Law, will check to a very large extent the immoderate use of the plant by Indian immigrants' population of the colony."

79. In paragraph 553 of the Report, the question of suppressing all intoxicants has been dealt with, and the following expressions are made therein:—

(*a*) "No laws are of any service which are above the working level of public morality."

(*b*) "Scarcely any degree of utility short of absolute necessity will justify a prohibitory regulation, unless it can also be made to recommend itself to the general conscience, unless persons of ordinary good intentions either believe already or can be induced to believe that the thing prohibited is a thing which they ought not to wish to do."

(*c*) "In the exceptional cases in which the experiment has been attended with general success (as in some of the American States) the reformation of the habit has become an object of desire to the majority of the people, and the enactment for promoting such reformation has presented itself less as a restriction than as an auxiliary agency."

It has been proved (*vide* paragraphs 38 to 64 of this note) that the use of ganja and charas is physically, mentally, and socially very deleterious, and that their use is religiously prohibited and socially much in disrepute (*vide* paragraphs 19-29 of this note). When such is the case, I believe that the country is quite ripe for the introduction of prohibitory measures in respect to the injurious intoxicants. In paragraph 554 of the report this view is supported thus, "Now a certain number of persons deem it to be the duty of the British Government to suppress the trade in all intoxicants in all the countries under its sway, and there are, no doubt, special circumstances in India which render it less impossible than in some other countries to consider even so drastic a policy. These are notably the *general sobriety of its race*, and the *feeling, popular* as well as *religious*, which prevails *against their use* among a *large section of the community*."

80. In paragraph 562 of the Report some doubt has been expressed as to whether the article called hashish resembles the Indian products of the hemp plant. But the following authorities clearly show that in Arabic hashish is a synonymous term for the hemp drugs, especially bhang.

(1) Hashish is the Arabic name of hemp. It is bhang, not charas (see pages 4 and 9 of Hem Chandra Ker's report).

(2) Dr. Watts in his Economic Products of India states that "The Arabic hashish would seem to be given in allusion to the green intoxicating liquor" (see page 5); that bhang is generally known by the Arabic name hashish (see page 21); and that sabzi, hashish, bhang, and sidhi are synonyms of bhang, and all are applied to the drug as well as to the intoxicating drink prepared from it (see page 44).

81. *Precedents of other countries.*—In paragraph 557 of the Report an allusion is made to precedents for the prohibition of hemp drugs in other countries, and the statements are taken, I believe, from the journal of the Temperance Society, the Abkari for July 1893, which should be consulted in original.

The production, sale, and consumption of the hemp drugs are prohibited in the following countries:—

1. Lower Burma.—By the order of the Government of India, dated 17th December 1873.

2. Upper Burma.—Under the above order.

3. Trinidad, a British colony (see Trinidad Commission's report, paragraph 9).

4. Mauritius, a British colony (see above report, paragraph 9).

5. Greece.—By Circular No. 22, dated Athens, March 27th, 1890, when the use of hashish in cafés and all other places was forbidden, and establishments in which it was found that hashish was supplied to persons frequenting them were closed.

6. Turkey.—Under note dated 1st March 1892, addressed by the Grand Vizir to the Ministry of Commerce.

7. Egypt.—By decree of March 29th, 1879, by order of Khedive.

8. Nabha State in the Punjab (see paragraph 735 of the Report).

82. The prohibition of ganja in Burma has proved successful and of immense benefit to the country, and no change in the present administration is needed or advocated, as will be seen from the following few quotations :—

(1) Letter from Mr. Bayne, Secretary to Chief Commissioner, dated 2nd November 1893, paragraph 5.—"No one in Burma desires any change in the excise law, so far as intoxicating drugs are concerned."

(2) From the Commissioner of Tenasserim Division to the Financial Commissioner, Burma, dated 30th January 1894.—"The effect of the prohibitory system has undoubtedly been to render it somewhat difficult and dangerous for any one to possess the drug, and this must have very largely tended to keep it out of the hands of Burmans. In my opinion if this system had not been adopted, the results would have been disastrous. Burmans would very certainly have taken to use ganja, for which they have no desire, and from their national character those who took to it would have used it to excess, as is the case with opium, which taken in moderation does no harm. Were the consumption and even possession of ganja not prohibited effect would be terrible."

(3) Memorandum by Mr. Culloden, Assistant Collector of Customs and Superintendent, Preventive Service, dated 1st December 1893.—"Ganja has always been considered a prohibited drug in Burma. The prohibition of its importation has so far been successful that the drug has been kept out of the local market to a considerable extent; this is proved by fact that, whenever traced to any one possessing it, only very small quantities of the *drug have been found* on them."

(4) Letter from the Deputy Commissioner, Akyab, dated 1st December 1893.—"The system of prohibition has on the whole been successful."

(5) Colonel C. B. Cooke's answer, page 5.—"I think the prohibition should not be omitted."

(6) Letter from Deputy Commissioner, Tongoo, dated 12th January 1894, page 6, paragraph 2.—"In my opinion the system of prohibiting ganja in Burma has been to a very large extent, though not entirely, successful."

(7) Letter from the Commissioner, Arakan Division, dated 19th December 1893.—"I don't think there is any necessity for altering the system of prohibition in force in Burma."

(8) Letter from the Commissioner, Southern Division, dated 16th January 1894—"As far as my experience goes, the system of prohibition of ganja has worked well. This is based on my experience in different places."

(9) Letter from Deputy Commissioner, Mergui, dated 24th January 1894.—"As far as the general public are concerned, the use of ganja is practically extinct."

(10) Witness No. 1, Colonel H. R. Spearman, Commissioner.—"The consumption of ganja would have been very much larger among the natives of India if there had been no prohibition." "Is, and should continue to be absolutely prohibited." "I am exceedingly

anxious to prevent as much as possible the Burmans from becoming consumers."

(11) Witness No. 12, Major G. S. Eyre, Deputy Commissioner.—"The existing prohibition is effective." "The total prohibition now in force is absolutely necessary. Were the use of the drug to be sanctioned, the spread of the habit would be great and the results lamentable."

(12) Witness No. 9, Mr. A. M. B. Irwin, Deputy Commissioner.—"I do not think the present prohibition causes any discontent, and that therefore it would be unwise to withdraw it without very strong reasons."

(13) Witness No. 2, Lieutenant-Colonel C. B. Cooke, Commissioner.—"... .....but still I think the prohibition should not be annulled." "Yes, I think it should be left unchanged." "Even if ganja could not be obtained from the plant as grown in Burma, I should still be averse from licensing its sale, because I consider that the licensing system raises up a class whose interest it is to spread consumption. I think that any licensing system would be far less effectual as regards the Burmese than the present prohibition."

(14) Witness No. 14, Mr. de la Courneuve, Deputy Commissioner.—"The absolute prohibition of the production and consumption of ganja in the Province in 1872-74 has had the best results and cannot be improved upon."

(15) Witness No. 3, Mr. J. G. Bridges, Commissioner.—"The Burmese generally approve of the prohibition of the drugs. As a people they disapprove the use of the drug." And that "I think the prohibition should be maintained."

(16) Witness No. 10, Mr. H. Adamson, Deputy Commissioner.—"It is certain that the use of these drugs among Burmans is quite insignificant, and I have no doubt that this fact is due in great measure to their use being prohibited by law."

(17) Witness No. 16, Mr. Fraser, Deputy Commissioner.—"The prohibition as regards Burmans should be maintained under penalties to both buyer and seller."

83. *Prohibition desirable.*—Now I turn to examine the evidence of witnesses who have expressed any opinion upon the question of *prohibition*. It was unfortunate that no question was specifically put to them to ascertain the desirability of prohibition, as mentioned in paragraph 568 of the Report, and thus most of them abstained from directly expressing their opinion on the point.

I do not agree in the conclusion arrived in paragraph 569 of the Report, that the majority of witnesses are against prohibition; but, on the contrary, hold that an overwhelming evidence is for *prohibition*, and my reasons are as follow :—

(1) Because they have been shown to be most deleterious, physically and mentally (*vide* paragraphs 38-59 of this note).

(2) Because the consumption of these articles produces bad effects upon the society (*vide* paragraphs 60-64 of this note).

(3) Because they are much in disrepute (*vide* paragraphs 19-29).

(4) Because ganja was prohibited in *Burma* in 1873, and the experience of the last 20 years has shown that the prohibition has been of immense good to that country, so much so that the Government officers of that province do not advocate any change.

(5) Because it was always prohibited by the Hindu and Mahomedan governments preceding the English Government.

(6) Because the Government of India has repeatedly acknowledged the desirability of the *prohibition* (*vide* paragraphs 72-76).

84. *Prohibition feasible.*—The prohibition of ganja and charas is feasible on the following grounds :—

(1) Charas is imported into India from *Yarkand* and other foreign countries, and can be stopped without difficulty, as stated in paragraph 567 of the Report.

(2) In paragraph 6 of this note it is shown that ganja cannot be produced from the wild and uncultivated hemp plants. It is an admitted fact that the cultivation of ganja is already confined to limited areas in certain provinces, and that its cultivation and manufacture requires particular knowledge, skill, and care. Therefore the existence of the wild hemp plants, wherever they are found in India, would not at all affect the practical difficulty of checking and stopping the consumption of ganja. Paragraph 664 of the Report would throw some light on this point.

(3) In paragraphs 19-37 of this note it has been shown that their use is not connected with any social and religious customs and that their use is held in much disrepute. Therefore their *prohibition* will not be taken as an interference with old customs or resented to by the people. On the contrary, the people will be grateful to Government for prohibition.

85. *Political danger.*—The consumption of ganja and charas is confined to beggars and low class people, whose number does not exceed to one man in about every 500 of the population. Therefore there is no chance of a public discontent or political danger. The following statement shows that a very large majority of witnesses hold the above opinion :—

Province.	Political danger.			No political danger.			Remarks.
	Officials.	Non-officials.	Total.	Officials.	Non-officials.	Total.	
Bengal	13	12	25	54	57	111	
Assam	...	...	...	8	12	20	
North-Western Provinces ...	7	5	12	27	69	96	
Punjab	4	5	9	18	14	32	
Central Provinces ...	9	9	18	12	14	26	
Carried over ...	33	31	64	119	166	285	

Province.	Political danger			No political danger			Remarks.
	Officials.	Non-officials.	Total.	Officials.	Non-officials.	Total.	
Brought forward ...	33	31	64	119	166	285	Witnesses silent on this point have not been taken into account.
Madras	6	1	7	39	25	64	
Bombay	6	4	10	30	12	42	
Sind	3	2	5	5	7	12	
Berars	...	...	...	7	5	12	
Ajmere	...	...	...	1	...	1	
Coorg	...	...	...	...	2	2	
Beluchistan	...	...	...	...	...	...	
TOTAL ...	48	38	86	201	217	418	

86. I have given a list in statement V of some witnesses of position and experience who state that there would be no political danger if the use of these drugs is prohibited, and quote here Mirza Irfan Ali Beg, Deputy Collector, Gonda, witness No. 47, N.-W. P., who says, "the drugs can be prohibited by disallowing the exports and imports and sales of the drugs. I do not think it will cause any serious discontent among the consumers, who are for the most part the Hindu Fakirs and the Brahmans. It was experienced in this district last year, when there was no sale of these drugs for about 5 months. The people felt an inconvenience, as far as it related to their habit, and nothing else. There will be no political danger and they being Brahmans and fakirs, would not take alcoholic stimulants. They will be content with tobacco."

87. *Danger of using more deleterious drugs.*—There is no fear that the people will be driven to more deleterious drugs, such as dhatura. The evidence has established that the consumers of ganja and charas very seldom use dhatura at present. Therefore there is no danger of that kind. The number of witnesses who allude to the possibility of the use of dhatura is quite insignificant. In the report only 31 out of 1,194 witnesses have been mentioned. Some of these 31, too, will on examination be found not to hold this opinion, *viz.*, that dhatura will take the place of ganja. For example:—

(1) Bombay witness 1, the Honourable Mr. Mackenzie, Commissioner of Excise, says:—"I do not think the labouring classes who use the drugs would take to dhatura. They would rather take to alcohol. I think this would probably do less harm . . . . . than the hemp drugs."

(2) Bombay witness 109, Secretary, Arya Samaj, who refers simply to alcohol.

(3) Bengal witness 164, Raja Surja Kanta Acharjya Pahadur, who refers simply to alcohol.

(4) Bengal witness 167, Rai Bahadur Radha Ballav Chowdhry, who refers simply to alcohol.

(5) North-Western Provinces witness 51, Thakur Tukman Singh, who says that "dhatura could not be substituted for ganja."

(6) Punjab witness 76, The Honourable P. Chander Chatterjee, who refers to alcohol only.

(7) Madras witness 23, Mr. Campbell, Collector, who refers to alcohol only.

On some of the conclusion arrived at by the Commission.

88. *Policy of control and restriction.*—In paragraph 552 of the Report it has been stated that "in regard to the physical effects the Commission have come to the conclusion that the moderate use of hemp drugs is practically attended by no evil results at all;" that "in respect to the alleged mental effects of the drugs, the Commission have come to the conclusion that the moderate use of the hemp drugs produces no injurious effect on the mind;" that "in regard to the moral effects of the drugs, the Commission are of opinion that their moderate use produces no moral injury whatever;" and that "the moderate use of these drugs is the rule and that the excessive use is comparatively exceptional . . . . The excessive may certainly be accepted as very injurious, but it must be admitted that in many excessive consumers the injury is not clearly marked. The injury done by the excessive use is, however, confined almost exclusively to the consumer himself; the effect on society is rarely appreciable." If these views are accepted, there would be no reason which ought to lead to a recommendation for the policy of control and restriction of these drugs by means of taxation. All along it has been declared by our benign Government that the injurious intoxicants are taxed for the sake of restricting their consumption and not for the sake of revenue. When the injurious character of these drugs has not been established to the satisfaction of the Commission, I think they were not justified in advocating this policy of restriction; for in the light of the above remarks made by the Commission these drugs should stand on the same level with tea, tobacco, and other similar stimulating articles; and so long as the latter are not taxed there would hardly be any ground to tax ganja and charas, which have the further recommendation to be left free as their consumption is confined mostly to the poor classes and beggars.

89. *Method of taxation.*—The combination of a direct duty with the auction of privilege of vend has been recommended. This seems to be against the general principle of taxation, for it cannot be denied that by the system of license of vend an indirect duty is raised, and thus the drugs will be taxed twice. For the sake of restriction perhaps it would have been enough to tax them once high enough.

Judging from the past precedents, I have not the least hesitation in asserting that the recommendations of the Commission will not have any effect in restricting the use of hemp drugs.

Under the present system of Bengal a class of wholesale vendors has been created whose interest lies in stimulating the supply of ganja and another class of retail vendors whose interest lies in publishing and stimulating the demand. There is a 3rd class created, who are called brokers. All these are agents for the spread of consumption. The restriction of use is clearly against their personal interests.

90. *Introduction of Bengal system into other provinces.*—It is an admitted fact that the consumption of ganja in Bengal is more extensive than in any other province and that its evil effects are also more potent there. Under these circumstances it is difficult to understand the ground on which the introduction of that system is recommended for other provinces where the consumption is still very low and no attempt has yet been made to grow the drug of a superior class.

91. *Abolition of the fixed price and grant of wholesale licenses more freely and without charge in the Central Provinces.*—The recommendation of the Commission to abolish the fixed rate at which the wholesale vendors in the Central Provinces are at present bound to sell ganja to the retail vendors will, I believe, result in increasing the profits of the wholesale vendor. The increased profits and grant of licenses more freely and without charge, will create a number of wholesale vendors, who will not fail to improve and do everything in their power to stimulate the production and increase the consumption.

The present system of having a fixed price limits the profits of the wholesale vendor, and the result has been that their number is not so large nor the consumption as great as in Bengal, where the price is left in the hands of the vendor.

92. *Gradual taxation of charas.*—When in Bengal the rate of direct duty is Rs. 9 per seer on chur ganja, it is not understood why the Commission recommended so low a rate as Rs. 2 a seer for charas in the Punjab, the charas being evidently admitted to be much stronger than ganja. Although in paragraph 674, I must admit, it is noted that this amount has been recommended as one that should be imposed "to begin with" and ultimately the taxation is to be "raised considerably" regard being had to prevent "the trade being seriously affected." The policy here seems evidently to be one to take as much as the people can pay and not the full amount which might lead to injure the trade and stop consumption.

93. *Opening of new shops.*—New shops are recommended to be opened after a consultation with municipal members, etc., about the necessity for opening them. It is not stated who should be the proposer for these shops. I think the opening of new shops will only afford a greater facility for consumption and will enable these obnoxious drugs to reach their new converts. It would perhaps have been more in keeping with the principles of the Commission if the new shops at least had been stopped. But if new shops must be opened the only alternative that I have to suggest is to propose the condition that the application should be made by the inhabitants of the place.

94. *Sale of ganja in Burma.*—Among other proposals the Commission have recommended sale of ganja in Burma for the benefit of the natives of India. The only good which this proposal will do, if carried out, will be to render *null* the protection which the prohibition of its sale in that country at present affords to the Burmese. For I have not the least doubt that the contagion of its use will soon spread to the Burmans from the Indians, and that the natives of that country will soon learn the luxury of consuming this drug by procuring it through their Indian friends; and ultimately when they have sunk deep in the vice, grounds will be made out to extend the sale of these drugs openly to the Burmans. I must not omit that all the Burma officials without hardly a single exception, have stated that there is no need to change

the present system of prohibition, and some of them have gone so far as to say that if the consumption and even possession of ganja were not prohibited, effect would have been terrible, for the Burmans from their national character would have used it to excess. For further information on the subject I beg to refer to para. 82 of my note, in which the evidence of some of the important officers is quoted *in extenso*.

Recommendation.

95. In conclusion I beg to subjoin my final recommendations, which are the same as those that I submitted on the 6th August at the last sitting of the Commission.

I.—Charas is very deleterious and the use of this form of the drug is highly in disrepute. It has no connection whatever with religious and social customs of the people, and as it is imported from foreign countries it is quite feasible to prohibit its importation. I would therefore recommend the prohibition of its manufacture, importation, and sale. With a view to save the persons connected with the manufacture and trade of charas from suffering any pecuniary loss and the habitual consumers of charas from the inconvenience of sudden deprivation of the use of the drug, it would be advisable to give sufficient notice and allow a time before the adoption of prohibitory measures.

II.—Ganja is similarly deleterious in its effects. It is as disreputable as charas and has no connection with social and religious customs. Its consumption is confined chiefly to bad characters, low class people, and beggars. I am of opinion that the prohibition of its production and sale is desirable and feasible; that the present excise administration has, generally speaking, failed in restricting its use, and that prohibition of ganja in Burma has proved of immense benefit to the people of that country. I would therefore recommend that measures should be adopted keeping ultimate prohibition in view, and that as a preliminary step towards prohibition the system of registering the consumers of ganja and charas should be adopted for a reasonable time like that which has been adopted in Burma since 1892 for the opium consumers.

III.—Bhang is the least injurious of all the intoxicants commonly used in this country. It is to a certain extent connected with the social and religious customs of the people. The bhang plant could be found in certain parts of the country growing wild, and in my opinion it would not be a very easy task to bring the production and sale of bhang under full control of the Excise Department without much annoyance to the people. For these and other reasons, I would recommend that bhang may be left alone for the present.

NIHAL CHAND,

13th September 1894. *Member, Hemp Drugs Commission.*

STATEMENT I.—*Social and religious customs. (Para. 37 of the note.)*

Bengal.

1.—Ganendra Nath Pal, Sub-Divisional Officer.—*Number of witness*—46.

Q. 32.—"The consumption of ganja is not required by any social or religious custom. Bhang is a social custom, drunk as sherbet on the fourth day of the Durga Puja."

2.—Durgaguty Banerji, Collector of Calcutta.—*Number of witness*—13.*

Q. 32.—"As regards consumption of ganja and charas I am not aware of any customs, social or religious, in which it is prescribed, but sidhi is largely, though in moderate doses consumed by all classes of Hindus on the 4th day of the Durga Puja."

3.—Mahesa Chandra Nyayaratna, Principal, Government College of Sanskrit, Calcutta.—*Number of witness*—93.

Q. 35.—"Ganja smokers are held in disrepute."

4.—Prokash Chunder Roy, Excise Deputy Collector, Patna.—*Number of witness*—58.

"In these provinces no customs, social or religious, are known in which ganja is essential."

5.—Akshay Kumar Maitra, Secretary, Rajshahye Association.—*Number of witness*—233.

Q. 32.—"I know of no social or religious custom in regard to the consumption of ganja, and I believe there is none."

6.—Gobind Chundra Das, Excise Deputy Collector.—*Number of witness*—64.

Q. 33.—"The use of these drugs is always in disrepute. No respectable person would associate with one who indulges in ganja, bhang, or charas.

Q. 51.—"It can, however, be asserted that ganja smokers are as a rule regarded as of a disrespectable character, and as being persons to be avoided by all respectable gentlemen."

7.—Sri Sri Maharaj Raghunath Saran Singh Deo, Zamindar.—*Number of witness*—153.

Q. 32.—"It is not required to be used in festivals."*

8.—Brahmo Deo Narayan Misr.—*Number of witness*—157.

Q. 32.—"There is no social or religious custom which enjoins the consumption of any of these drugs. Rather every sect of Hindu religion prohibits the use of any of these intoxicating drugs. Certainly there are persons who in the name of religion, for their personal gratification, use these drugs and persuade others to do the same, especially among ignorant class of people. Such people are generally to be found among the fakirs or sadhus, who are in reality knaves, attach much religious importance to themselves and never shrink from any sort of mischief."

9.—Hem Chunder Kerr, Sub-Registrar and Pensioned Deputy Collector and Author of the Notes on Ganja.—*Number of witness*—80.

Q. 33.—"The consumption is generally regarded with disfavour. The practice is looked upon by the society as low and disreputable. The sentiment is attributable to the injurious effects of the drugs by their abuse. I do not know of any such custom."

10.—Representative, Indian Relief Society, Calcutta.—*Number of witness*—238.

Q. 33.—"But to discuss the subjects on its merits the issues should be clearly understood. It must first of all be noticed that charas and majum and ganja as now used are never sanctioned by religious custom or usage. As for ganja, we append here (*vide* Appendix II) the Vyavasthas (opinions) of eminent pandits, which condemn its use and declare that, except some reference to it in the tantras, which are considered modern interpolations, there is no mention of it made in any other Shastras. The theory of religious sanctions for the use of ganja gets a rude shock, when we examine the way in which people of this country take to it. In fact it is not enjoined in one or the other Shastras, but is used because it serves as a cheap and powerful intoxicant."

* NOTE.—These witnesses are not reported.

Assam.

11.—Laksmikanta Barkagati, Secretary, Tezpur Ryots' Association.—*Number of witness* 46.

Q. 33.—"The consumption of ganja is looked upon with hatred. Ganja smokers are generally treated with contempt; they are believed to be untrustworthy. Ganja smokers are not true to their words; they are a source of annoyance to the neighbours; they do not mind to their works; these are the reasons why they are generally hated."

12.—Radha Nath Changkakoti, Dibrugarh.—*Number of witness*—47.

Q. 33.—In Assam the use of not only hemp, but of all intoxicating drugs is religiously prohibited. In the Shastras or the convents of the principal Gussains or spiritual guides in Assam the rule against the use of any intoxicating thing is strictly enforced."

Q. 20.—"As a rule ganja is smoked by the lower class of people and especially by the lowest of ascetics."

North-Western Provinces.

13.—The Hon'ble the Raja of Bhinga, C.S.I.—*Number of witness*—180.

Q. 32.—"There is no social or religious custom in this part of the country. The lower classes of people, however, sometimes make use of bhang when they cannot procure grog for such occasions as social gatherings. Manu distinctly lays down that the use of all intoxicating drugs is unlawful."

14.—Munshi Ujagur Mal, retired Deputy Collector.—*Number of witness*—55.

Q. 32.—"There is no custom in any caste or religion enjoining consumption of any of these drugs."

Q. 33.—"Consumption of bhang is not looked upon with favour, but there is no general public opinion against it, but consumption of charas is looked upon as a vice, as it is used by men of low caste more especially. There is no custom of worshiping the hemp plant."

15.—Thakur Tukman Singh, Zemindar.—*Number of witness*—51.

Q. 32.—"The use of these drugs is strictly forbidden in the Vedas and Shastras, the religious books of the Hindus. The use of it is similarly prohibited amongst the Muhammadans."

"The ignorant persons take up this habit for want of religious doctrines. During the holi festivals people of high caste use majum (which is prepared from bhang), while the lower caste persons drink liquor."

"It is not a part of the religious custom, and is not essential."

16.—Chaudhri Ghasi Ram, landowner, Maulaheri.—*Number of witness*—187.

Q. 35.—"The feeling of the people is strongly against drugs."

17.—Rai Bahadur Munshi Sheo Narain, Secretary, Municipal Board, Agra.—*Number of witness*—226.

Q. 33.—"The use of these drugs is generally considered to be disreputable, with the exception of bhang. The use of charas and ganja is against religious principles. The use is considered to be disreputable, as these drugs are generally used by the lower classes."

18.—Mahant Kesho Ram Rai, Preacher.—*Number of witness*—242.

Q. 32.—"No social or religious custom."

Q. 33.—"The consumers of these drugs are hated and despised by society on account of the consequences of the drugs."

Q. 32. Oral.—"There is no religious injunction to take the drugs."

19.—M. Hashmat Ullah, Joint Magistrate.—*Number of witness*—30.

"No custom, social or religious, may be mentioned in regard to the consumption of any of the drugs. Use of the drug is in no way essential with regard to any custom."

20.—Pundit Sri Lal, Officiating Joint Magistrate,—*Number of witness*—33.

"There is no custom, social or religious, in regard to the consumption of ganja and charas."

21.—Raja Lachman Singh, retired Deputy Collector.—*Number of witness*—182.

"Except bhang the use of the other drugs is generally regarded as disreputable."

Central Provinces.

22.—Chandi Prashad, Malguzar and President.—*Number of witness*—61.

"There is no social or religious obligation to take these drugs even amongst Bairagis and Gusains. Bhang is sometimes spoken of as 'Mahadeo's leaves,' but there is nothing in the Shastras to that effect."

23.—Rao Venkat Rao, Malguzar and Political Pensioner.—*Number of witness.*—63.

Q. 32.—"In this province there is no custom, either religious or social, regarding the consumption of ganja or bhang."

Q. 33.—"The public opinion is against the use of these drugs. The use of these drugs is held in disrepute because it is injurious to health."

24.—The Hon'ble Gangadharrao Madhav Chitnavis, Honorary Magistrate, and Member, Viceregal Council.—*Number of witness*—46.

Q. 32.—"It is not used here in these provinces for religious purposes."

Q. 33.—"The consumption of each of these drugs is looked down upon by the people. It is considered immoral in the social scale. Generally all sorts of vices are looked down upon by the better classes of society, and as this is a narcotic that is generally used by the lower classes of people, and as its consumption is necessarily very generally associated with bad characters, and also as the smoking of this drug has a tendency to make its victims demoralized and much of their mental vigour, the habit is looked down upon by the people. No classes or persons here worship the hemp plant."

25.—Raja Sudhal Deb.—*Number of witness*—47.*

Q. 32.—"No religious or social ceremonial enjoins the essential use of ganja as far as I know."

Q. 33.—"The public regard the smoking of ganja with unmixed contempt."

26.—Trimbak Rao Sathe.—*Number of witness*—13.

Q. 33.—"People consider the ganja smoker as an unwelcome associate. Such men are generally debauchees or of disreputable character."

27.—Syed Muhammad Husain, Diwan.—*Number of witness*—15.

Q. 32.—"To the best of my knowledge there is no custom, religious or social, in regard to any of these drugs."

Q. 33.—"The consumption of ganja is regarded very badly. The public opinion about this is that it is the most derogatory kind of intoxication and its smoker is looked upon as a mean person. Its use is forbidden by the Muhammadan religion, and Brahmans also abstain from it."

28.—Pandit Narain Rao Gobind, Zamindar.—*Number of witness*—60.

Q. 32.—"None of these drugs bears any connection with religion, caste, or custom; they are only taken for intoxication."

Bombay.

29.—Rao Saheb Shesho Krishna Madkavi.—*Number of witness*—41.

Q. 32.—"There is no custom at all, social or religious, in regard to the consumption of any intoxicating drugs, like bhang, ganja, &c. On the contrary, their use is forbidden by religion. A consumer of such drugs has no religious or social binding to use the drug."

Q. 33.—"The public opinion (social and religious) is against the use of the drug."

* NOTE.—These witnesses are not reported.

30.—Balkrishna Narain Vaidya, B.A.—*Number of witness*—46.

Q. 32.—"There is no custom, religious or social, in regard to the consumption of ganja."

Q. 33.—"Society looks upon ganja with contempt, as it produces evil effects on the body and mind in old age and decline of health."

31.—Dr. Ganesh Krishna Garde, L.M.S.—*Number of witness*—91.

Q. 33.—"Smoking of ganja or charas is generally regarded by higher and middle classes as disreputable, this sentiment being deleterious effects of the drug on mind and body."

32.—Surgeon-Major K. R. Kirtikar, L.M.S.—*Number of witness*—73.

Q. 32.—"No shastrical text, so far as I have been able to ascertain with the aid of my Sanskrit Pandit, exists rendering the use of either of these drugs essential."

33.—Rao Bahadur Rango Ram Chandra.—*Number of witness*—31.

Q. 32.—"No custom, social or religious, in regard to the consumption of any of these drugs exists in the Southern Maharatta country."

Q. 33.—"The consumption of any of these drugs is generally regarded as a vice."

34.—Ardesir Dadabhoy Mody, L. M. and S. P. J.,—*Number of witness*—97.

"There is no social or religious custom among the Parsees in which bhang is consumed."

Madras.

35.—M. R. R. Diwan Bahadur S. Venkata Ramáder.—*Number of witness*—35.

Q. 32.—"There is no custom, social or religious, in regard to ganjayi."

36.—Samdasu Bavaji, priest.—*Number of witness*—191.

Q. 32.—"The use of ganja is not considered as essential to social or religious customs as some say."

37.—Teachers' Association.—*Number of witness*—174.

Q. 33.—"The consumption is treated with contempt. Religion and society do not sanction it."

38.—Viswanadhan Guravaiah Sastri.—*Number of witness*—166.

Q. 33.—"The use of ganja and bhang is regarded as a bad habit. In societies men of these habits are not tolerated."

39.—The Hon'ble A. Sabapathy Moodelliar, Rai Bahadur, merchant.—*Number of witness*—175.

Q. 32.—"The use of ganja by the Brahmans of this presidency is prohibited by religion. The other respectable castes follow suit in holding the same view."

Q. 33—"Ganja smokers in this province are looked upon as people whose words cannot be relied on; the use of any form of the narcotic is generally in disrepute, because intoxication blinds the reason of man, his brain is muddled, and under its influence the man evolves endless fancy, mental pictures, and indulges in them to the detriment of his duty in the world as man."

40.—E. Subramana Iyer, Chairman.—*Number of witness*—143.

Q. 32.—"The use is not encouraged by any social or religious custom. It is not considered to be essential in any way; but on the other hand it is deprecated by the society in general and forbidden by religion."

STATEMENT II.—*List of Medical Witnesses who pronounce the moderate use of ganja and charas to be deleterious in answer to questions Nos. 42, 45, and 49. (Paragraph 44 of the note.)*

Serial No.	Province.	No. of witness.	Name and rank.
			Superiors.
1	Bengal ...	45	Surgeon-Major McDonald, Civil Surgeon.*
2	Do. ...	119	B. K. Sen, in Civil Medical charge.
3	Do. ...	107	Surgeon-Lieutenant-Colonel R. L. Dutt, Civil Surgeon.
4	Do. ...	108	Surgeon-Lieutenant-Colonel G. Price, Civil Surgeon.
5	Do. ...	103	Surgeon-Lieutenant-Colonel J. F. P. McConnell, Civil Surgeon.
6	Do. ...	118	Upendra Nath Sen, Officiating Civil Medical Officer.
7	Do. ...	102	Surgeon-Lieutenant-Colonel W. Flood Murray, Civil Surgeon.
8	Do. ...	109	Surgeon-Lieutenant-Colonel E. Bovill, Officiating Civil Surgeon.
			Subordinates.
9	Do. ...	123	Devendra Nath Ray, Teacher of Medical Jurisprudence.
10	Do. ...	128	Hari Mohan Sen, Assistant Surgeon.
11	Do. ...	127	Behari Lal Pal, Assistant Surgeon.
12	Do. ...	150	D. N. Chuckerbutty, Assistant Surgeon.
13	Do. ...	130	Meer Kumar Ali, Civil Hospital Assistant.
			Private Practitioners.
14	Do. ...	151	Bijoy Ratna Sen, Kaviraj.
15	Do. ...	152	Ganga Prosad Sen Kaviratna, Kaviraj.
16	Do. ...	133	Revd. D. Morison, Medical Missionary.
17	Do. ...	134	Pyary Sanker Das Gupta, Medical Practitioner, Secretary, Bogra Medical Society.
18	Do. ...	136	Mohim Chunder Ray, Medical Practitioner.
19	Do. ...	154	Peari Mohun, Kaviraj, Native Physician.
20	Do. ...	137	Kedareshwar Acharjya, Medical Practitioner.
21	Do. ...	146	Ram Chunder Gupta, Kaviraj.
22	Do. ...	139	Dr. Mahomed Sadrul Haq, Medical Practitioner.
23	Do. ...	140	Trailokya Nath Mazumdar, Medical Practitioner.
24	Do. ...	141	Prosad Das Mullick, Medical Practitioner.
25	Do. ...	142	Nimay Churan Das, Medical Practitioner.
26	Do. ...	157	Brahmo Deonarayan Misser Vaid, Native Medical Practitioner.
27	Do. ...	158	Madhava K. Das, Private Practitioner.
28	Do. ...	143	Tara Nath Bal, Medical Practitioner.
29	Do. ...	144	Nakur Chandra Banerji, Medical Practitioner.
30	Do. ...	145	Luchmi Narayan Naik, Medical Practitioner.
31	Do. ...	237	
32	Do. ...	148	Annada Prosanno Ghatak, Medical Practitioner.
			Superiors.
1	Assam ...	20	Surgeon-Major J. W. Macnamara, Civil Surgeon.
2	Do. ...	23	Dr. H. A. Macleod, Civil Medical Officer.
3	Do. ...	24	James McNaught, Civil Medical Officer.
			Subordinates.
4	Do. ...	25	Atul Chunder Ray, Assistant Surgeon.
5	Do. ...	27	Azher Hossein, Civil Hospital Assistant.
6	Do. ...	26	Baikanta Kumar Nandi, Assistant Surgeon.
7	Do. ...	24	Lachman Pershad, Civil Hospital Assistant.
			Private Practitioner.
8	Do. ...	31	Krishna Chandra Sanyal, Medical Practitioner.
			Superiors.
1	N.-W. P.	87	Surgeon-Major J. F. Tuohy, Civil Surgeon.
2	Do. ...	88	Surgeon-Major W. Deane, Civil Surgeon.
3	Do. ...	79	Surgeon-Lieutenant-Colonel M. D. Moriarty, Civil Surgeon.

* These witnesses are not reported.

Serial No.	Province.	No. of witness.	Name and Rank.
			Superiors—contd.
4	N-W.P....	93	J. C. Ellis, retired Civil Surgeon.
5	Do. ...	84	Surgeon-Captain R. R. Weir, Superintendent, Central Prison.
6	Do. ...	82	Surgeon-Major E. Mair, Superintendent, Central Prison.
7	Do. ...	77	Surgeon-Lieutenant-Colonel R. A. K. Holmes, Superintendent, Central Prison.
			Subordinates.
8	Do. ...	105	Buldeo Singh, Government Service, Medical Department.
9	Do. ...	96	Nobin Chundra Chakravarti, Assistant Surgeon.
10	Do. ...	98	Subhan Ali, Assistant Surgeon.
11	Do. ...	113	Jamal Khan, Hospital Assistant.
12	Do. ...	104	Hori Lal, Assistant Surgeon.
13	Do. ...	118	Mohammad Husain, retired Hospital Assistant.
14	Do. ...	119	Waris Ali, Hospital Assistant.
15	Do. ...	115	Mohammad Baksh, Hospital Assistant.
16	Do. ...	99	Poorna Chandra Banerji, Assistant Surgeon.
17	Do. ...	100	Ganga Singh, Assistant Surgeon.
18	Do. ...	97	Mul Raj, Assistant Surgeon.
19	Do. ...	116	Bhagelu Ram, Hospital Assistant.
20	Do. ...	117	Rahimullah, Hospital Assistant.
21	Do. ...	111	Prasana Kumar Banerji, Assistant Surgeon.
22	Do. ...	106	Mohammad Abdur Rahim, Khan Bahadur, Assistant Surgeon.
23	Do. ...	95	Troylucko Nath Ghose, Assistant Surgeon.
24	Do. ...	109	Pandit Hari Dutt Pant, Assistant Surgeon.
			Private Practitioners.
25	Do. ...	120	S. P. Roy, Municipal Analyst.
26	Do. ...	125	Ram Narain, Tebabut.
27	Do. ...	121	Mohammad Yar Khan, Pensioner and Health Officer.
28	Do. ...	126	Gokal Chand, Private Medical Practitioner.
29	Do. ...	127	Isan Chandra Ray, Medical Practitioner.
30	Do. ...	161	Abdul Samad, Hakim.
31	Do. ...	162	Mohammad Ibrahim Khan, Hakim.
32	Do. ...	163	Jugal Kishore, Vaid and Hakim.
33	Do. ...	164	Abdul Razak, Hakim, Municipal Board.
34	Do. ...	165	Salig Ram, Hakim.
35	Do. ...	166	Sayad Masoom Ali, Hakim.
36	Do. ...	167	Sayad Aulad Hossain, Hakim.
37	Do. ...	128	Pandit Kanhya Lal, Medical Practitioner.
38	Do. ...	129	Abu Ali Mohammad Jafar, Medical Practitioner.
39	Do. ...	130	Monahar Pershad Tewari, Practitioner in Medicine and Surgery.
40	Do. ...	131	Mazhar Subhan, Medical Practitioner.
41	Do. ...	132	Pandit Ram Narayan, Private Practitioner.
42	Do. ...	133	Pandit Gunga Din, Private Practitioner.
43	Do. ...	134	Mohammad Yasin, Medical Practitioner.
44	Do. ...	135	Syed Abu Ibrahim, Private Practitioner.
45	Do. ...	168	Gosayen Gopi Lal, Native Doctor.
46	Do. ...	169	Lachman Dass, Hakim.
47	Do. ...	136	Lachman, Medical Practitioner.
48	Do. ...	137	Amjad Hussain Khan, Medical Practitioner.
49	Do. ...	138	Musharraf Ali Khan, Medical Practitioner.
50	Do. ...	244	Piyari Lal, Petition-writer and Doctor.
51	Do. ...	139	Naim Ullah, Medical Practitioner.
52	Do. ...	140	Bal Mukand, Medical Practitioner.
53	Do. ...	141	Ram Narain, Apothecary.
54	Do. ...	142	Lala Bhairob Baksh, Mafidar and Physician.
55	Do. ...	171	Janki Dass, Baid.
56	Do. ...	172	Sakhawat Ali, Yunani Physician.
57	Do. ...	143	Ram Chandra, Medical Practitioner.
58	Do. ...	144	Mokurrab Hussain, Physician.

Serial. No.	Province.	No. of witness.	Name and Rank.
			Private Practitioners—contd.
59	N.-W. P.	145	Upendra Nath Ganguly, Medical Practitioner.
60	Do. ...	146	Mohammad Nazir Husein, Physician.
61	Do. ...	147	Buldeo Sahai, Medical Practitioner.
62	Do. ...	173	Mohammad Sadiq, Hakim.
63	Do. ...	148	Nobin Chunder Mitter, Medical Practitioner.
64	Do. ...	149	Ramji Mull, Medical Practitioner.
65	Do. ...	150	Kalli Baidji, Medical Practitioner.
66	Do. ...	151	Chandi Din, Medical Practitioner.
67	Do. ...	152	Gur Dutt, Medical Practitioner.
68	Do. ...	153	Amba Prasad, Private Practitioner.
69	Do. ...	174	Asghar Hosain, Native Physician.
70	Do. ...	175	Mohammad Ali, Yunani Doctor.
71	Do. ...	154	Nizam-ud-din Ahmed, Medical Practitioner.
72	Do. ...	155	Pandit Ram Dat, Physician.
73	Do. ...	156	Jogendra Nath Mullick, Medical Practitioner.
74	Do. ...	157	Brij Lal, Medical Practitioner.
75	Do. ...	158	Gopal Sahai, Medical Practitioner.
76	Do. ...	176	Mohammad Sarfraz Ali, Yunani Hakim.
77	Do. ...	159	Ganga Pershad, Medical Practitioner.
78	Do. ...	177	Jagannath Misr, Native Physician.
			Superiors.
1	Punjab ...	35	Surgeon-Major J. A. Cunningham, Civil Surgeon.
2	Do. ...	37	Rahim Khan, Khan Bahadur, Honorary Surgeon-Superintendent, Medical School.
3	Do. ...	34	Surgeon-Major G. W. P. Dennys, Civil Surgeon and Superintendent, Lunatic Asylum.
4	Do. ...	32	Surgeon-Major T. E L. Bate, Inspector-General of Prisons.
5	Do. ...	46	Dr. H. M. Clark, Medical Missionary.
			Subordinates.
6	Do. ...	39	Thakur Das, Rai Bahadur, Assistant Surgeon.
7	Do. ...	40	Rai Bahadur Mehr Chand, Assistant Surgeon.
8	Do. ...	42	Jassa Ram, Hospital Assistant.
9	Do. ...	43	Jhande Khan, Hospital Assistant.
10	Do. ...	41	Ram Narain, Assistant Surgeon.
11	Do. ...	38	Sahib Ditta, Assistant Surgeon.
12	Do. ...	44	Karam Elahi, Hospital Assistant, Lunatic Asylum.
13	Do. ...	45	Gopal Das, Hospital Assistant, Lunatic Asylum.
			Private Practitioners.
14	Do. ...	48	Hem Chandra Sen, Medical Practitioner.
15	Do. ...	49	Mathra Das, Medical Practitioner.
16	Do. ...	50	Pandit Mahadev, Medical Practitioner.
17	Do. ...	52	Narain Das, Medical Practitioner.
18	Do. ...	53	Pandit Jinar Dhan, Medical Practitioner.
19	Do. ...	51	Hakim Salimullah, Native Physician.
20	Do. ...	55	Shah Nawaz, Medical Practitioner.
			Superiors.
1	C. P. ...	38	Honorary Surgeon-Major J. E. Harrison, Civil Surgeon.
2	Do. ...	39	J. Prentie.
			Subordinates.
3	Do. ...	43	Mir Zamin Ali, pensioned Hospital Assistant.
4	Do. ...	42	Muhammad Habibullah, Hospital Assistant.
5	Do. ...	41	Doorga Das Sen, Assistant Surgeon.
			Private Practitioner.
6	Do. ...	68	Rev. O. Lohr, Missionary.

Serial No.	Province.	No. of witness.	Name and Rank.
			Superiors.
1	Madras...	85	Surgeon-Major W. G. King, Acting Sanitary Commissioner.
2	Do. ...	99	Surgeon-Major A. J. Sturmer, District Surgeon.
3	Do. ...	96	Surgeon-Major W. F. Thomas, District Surgeon.
4	Do. ...	95	Surgeon-Major S. C. Sarkies, District Surgeon.
5	Do. ...	98	Surgeon-Major R. Pemberton, Civil Surgeon.
6	Do. ...	88	Surgeon-Major N. Chatterji, Medical Officer in charge 18th Madras Infantry.
7	Do. ...	105	Dr. A. Wells, Medical Officer.
8	Do. ...	97	Surgeon-Captain C. F. Fearnside, District Surgeon.
9	Do. ...	89	Surgeon-Major H. A. F. Nailer, Acting District Surgeon.
			Subordinates.
10	Do. ...	104	Mohammad Asadulla, Civil Apothecary.
11	Do. ...	110	Ramanugulu Naidugaru, Hospital Assistant.
12	Do. ...	111	Chinny Sreenivasaru, Hospital Assistant.
13	Do. ...	125	Abdul Karim Sahib, Native Physician.
14	Do. ...	102	G. Vellones, Civil Apothecary.
15	Do. ...	113	Jagannadha Pandit, Hospital Assistant.
16	Do. ...	114	M. Maduranayagam Pillai, Hospital Assistant.
17	Do. ...	116	J. Parthasarathy Chetty, Hospital Assistant.
18	Do. ...	103	W. H. Daniel, Civil Apothecary.
			Private Practitioners.
19	Do. ...	122	Hakim Nanneh Miyyah, Medical Practitioner.
20	Do. ...	126	H. Rangappa, Medical Practitioner.
			Superiors.
1	Bombay...	73	Surgeon-Major K. R. Kirtikar, Civil Surgeon.
2	Do. ...	74	Surgeon-Colonel D. E. Hughes, Principal Medical Officer.
3	Do. ...	66	Surgeon-Major D. N. Parak, Surgeon to the Gokuldas Tejpal Hospital.
4	Do. ...	65	Brigade-Surgeon-Lieutenant-Colonel J. Arnott, Physician in charge St. George's Hospital.
			Subordinates.
5	Do. ...	76	R. S. Bhikaji Amrit Chobhe, Assistant Surgeon.
6	Do. ..	82	B. H. Nanavatty, Assistant Surgeon, Teacher of Surgery and Midwifery.
7	Do. ...	83	Bhau Succaram, Civil Hospital Assistant.
8	Do. ...	84	Rajani Lokaji, Civil Hospital Assistant.
9	Do. ...	85	Jamitaram Jayashankar, Civil Hospital Assistant.
10	Do. ...	86	Sadashiv Waman, Civil Hospital Assistant.
11	Do. ...	87	Phirozsha Dinsha, Civil Hospital Assistant.
12	Do. ..	89	Parsan Singh, Civil Hospital Assistant.
13	Do. ...	78	Anna Moreshwar Kunte, Assistant Surgeon.
			Private Practitioners.
14	Do. ...	95	Bhalchandra Krishna Bhatavadekar, Medical Practitioner.
15	Do. ...	97	Ardesir Dadabhoy Mody, Medical Practitioner, Member, Municipal Corporation.
16	Do. ...	96	Ismail Jan Mahomed, Medical Practitioner.
17	Do. ...	90	R. B. Vishram Ramji Ghollay, Medical Practitioner.
18	Do. ...	93	Edalji Nasserwanji, Medical Practitioner.
19	Do. ...	94	J. C. Lisboa, Medical Practitioner.
			Superiors.
1	Sind ...	16	Brigade-Surgeon-Lieutenant-Colonel Keith, Civil Surgeon and Superintendent, Lunatic Asylum.
2	Do. ...	15	Brigade-Surgeon-Lieutenant-Colonel Bainbridge, Civil Surgeon.

Serial No.	Province.	No. of witness.	Name and Rank.
			Subordinates.
3	Sind ...	18	E. Mackenzie, Assistant Surgeon.
4	Do. ...	23	Shaikh Ali, Civil Hospital Assistant.
5	Do. ...	20	J. E. Bocarro, Assistant Surgeon, Lecturer, Medical School.
			Private Practitioner.
6	Do. ...	24	Dr. S. M. Kaka, Health Officer.
			Superiors.
1	Berar ...	19	R. B. Roe, Surgeon-Major.
2	Do. ...	22	J. Morrison, Civil Surgeon.
3	Do. ...	24	S. Baijnath, Medical Officer, Mody Hospital.
4	Do. ...	25	J. H. Steinhoff, Medical Officer in charge Charitable Dispensary.
5	Do. ...	23	William John Montgomery, Civil Surgeon.
6	Do. ...	...	Surgeon-Lieutenant-Colonel E. Fawcett, Staff Surgeon.*
			Subordinates.
7	Do. ...	27	M. Doorgiah Pillay, 1st class Hospital Assistant.
8	Do. ...	28	M. Poonambalam Moodeliar, 1st class Hospital Assistant.
9	Do. ...	...	Nubbee Khan, 1st class Hospital Assistant.*
			Private Practitioners.
10	Do. ...	29	R. N. Mudholkar, L. M. & S., Private Medical Practitioner.
11	Do. ...	30	G. V. Khot, L. M., etc., Medical Practitioner.
			Superior.
1	Ajmere ...	3	Surgeon-Major D. Ff. Mullen, Civil Surgeon.
			Subordinate.
2	Do. ...	5	Asghar Ali Khan, Hospital Assistant.
			Private Practitioners.
3	Do. ...	6	Abdul Kayum, Hakim.
4	Do. ...	7	Jati Amar Hansa, Baid.
5	Do. ...	4	Khan Bahadur Dr. Sheik Elahi Bux, Government Pensioner and Honorary Magistrate.
			Subordinates.
1	Bilochistan	4	Mohammad Yusuf, Hospital Assistant.
2	Do. ...	5	Waryam Singh, Hospital Assistant.
3	Do. ...	6	Mohammad Akbar Ali Khan, Senior Hospital Assistant.
4	Do. ...	7	Bhugwan Dass, Hospital Assistant.

* NOTE.—These witnesses are not reported.

STATEMENT III.—*Opinions of some medical witnesses on effects.* (*Paragraph 59 of the note*).

Note.—The italicized words are those that have been quoted in the Report, paragraphs 500 to 509.

Bengal.

1.—Surgeon-Major Macdonald, Civil Surgeon.—*Number of witness*—45.

Q. 45.—The effect of the drug in (*a*) moderation is prejudicial to morality and health of the people, and is apt to run into (*b*) excess, when without doubt it leads to insanity and destruction of brain power, often ending in the commitment of the most atrocious crimes in the way of men running amok as well as in a few instances to sexual atrocities.

2.—Bosonto Kumar Sen, Assistant Surgeon in Civil Medical charge, Bogra.—*Number of witness*—119.

Q. 1.—As a medical man and service in ganja-produced districts.

Q. 45.—*Yes, the use of ganja and bhang produces noxious effects.*

They weaken the constitution and produce loss of appetite.

They generally produce dysentery, asthma, and bronchitis.

They impair the moral sense, indulge laziness or habits of immorality or debauchery. A ganja smoker never talks in any important moral, social, or religious subject, nor does he mix with good people. He has got a circle of his own, where he indulges in loathsome conversation. Ganja produces insanity (mania), both temporary and permanent. In temporary variety the symptoms were seen to recur on use of the drug after liberation from restraint.

The typical symptoms of insanity are excessive talking, constant motion, insomnia, incoherent, trembling and violent and screaming. The insanes generally confess to their taking the drug.

Q. 46.—Ganja produces the symptoms as mentioned under the heading habitual moderate use of the drug in a greater degree

Oral 45.—My first three sentences here deal with the effect of ganja on health generally. My remarks are founded on personal experience. *I have seen more than one person, about half a dozen in my village,* Madhopara, in the Dacca district, *suffering from dysentery, bronchitis, and asthma, who were also ganja smokers. They were all excessive smokers. These effects do not follow the moderate, but the excessive use. It is a mistake to have put them under the moderate use.* It is not always easy, however, to distinguish between the moderate and excessive, because moderation may go to excess. When I see a man I may think he takes it moderately. But when he is diseased I may come to know that he used it in excess stealthily.

All these people were habitual smokers, not occasional. From that I cannot exactly say that they used ganja in excess.

The fact that they were ganja smokers led me to believe that these effects were due to ganja. I have seen many non-smokers suffering from these diseases. There are many causes that bring on dysentery, bronchitis, and asthma. But I did not discover any other causes in these cases. *I have no recollection of ever treating any cases of dysentery, bronchitis or asthma caused by ganja. These cases are the basis of my remarks.* I saw them in my own village with my own eyes. *I do not remember any case of dysentery, bronchitis, or asthma in any ganja smoker which I attributed to any other cause. In other words, where I saw ganja smokers suffering from these diseases I attributed them to ganja. This was twenty years ago, before I was a medical student.*

3.—Russick Lall Dutt, Surgeon-Lieutenant-Colonel, I. M. S., Officiating Civil Surgeon, 24-Parganas.—*Number of witness*—107.

Q. 1.—Personal observation and experiments and intercourse with persons addicted to hemp habits in Bengal.

Q. 39.—The smoking of these preparations affects the nervous system directly, and is hence more injurious than eating or drinking. In the latter case the drug is slowly introduced through the digestive system, and exerts its effects slowly. Smoking is more deleterious to the nervous system, and gives rise to emaciation and other well-known symptoms, including insanity, sooner than drinking or eating the same drugs. Here, of course, I take the quantity to be equal both for smoking or drinking or eating purposes.

Q. 42.—Its use is always harmful, as it tends to increased consumption.

Q. 45.—As I previously observed, the habitual use of these drugs tends in most cases to excess. I have, however, seen several instances in hard-working and active men, where *very moderate smoking of ganja or charas or moderate drinking of siddhi*

in infusion do not produce any appreciable effects. Among singers in Bengal, artizans, and mill workmen moderate habit entails no immediate injurious effects, *but these moderate cases are seldom long-lived. There is in them a slow and insidious undermining process going on in their digestive, respiratory, and nervous systems, which predispose them to acute diseases and cut their lives short.* Among these moderate users weak intellect and a dull moral sense are invariably seen. When imperceptibly moderation is exceeded, then symptoms of impairment of the constitution, digestion, and nervous system manifest themselves to the skilled observer.

By habitual moderate use I understand a couple of smokes a day or a tola of siddhi in infusion. Individual instances of slight impairment of body and mind I have seen, but I did not record.

Q. 46.—The use of these drugs tends to excess as previously observed. The effects of siddhi-drinking are slow, but ultimately merge into those arising from ganja or charas smoking. The smoker of ganja or charas is known by his appearance and habits. He is generally emaciated, and walks slowly by the less frequented paths and parts of roads. He is generally taciturn, inoffensive, or skulking in his habits. His face has a sunken appearance, and his eyes are often bloodshot, especially after a smoke, with dilated pupils. Physically, he becomes a ruin; morally, depraved; and mentally, inane or insane. Excessive ganja or charas smoking results generally in two series of disorders—in the young and nervous individuals acute mania, followed by dementia. In the confirmed, old habituals there is gradual deterioration of body and mind, great emaciation, nervous disorders, great timidity, followed by impaired digestion, and, finally, an inveterate form of dysentery, cirrhosis of lung and liver. Ganja is a prolific source of insanity, curable in the young, but incurable in the old.

Q. 49.—These drugs are feeble aphrodisiacs, and are often used by immoral men and women as well as the upper classes of Muhammadans and Hindus who from abuse lose their sexual powers. Medicinally it is not injurious, and as such it is generally used. Excessive habitual use causes impotence. I have seen in more than a dozen instances.

4.—Gordon Price, Surgeon-Lieutenant-Colonel, I. M. S., Civil Surgeon.—*Number of witness*—108.

Q. 1.—During 21 years' service in India have frequently come across consumers of hemp drugs, and have conversed with them and with intelligent natives on the subject.

Q. 42.—I do not look upon the use of any of these drugs as harmless. I think the tendency is for the habit, once commenced, to become excessive and harmful.

Q. 49.—When ganja is smoked to excess, impotence results often in eight to ten years.

Q. 57.—a. Regarding the well-known loss of memory caused by the habitual smoking of ganja there is a Bengali proverb:—"Ganja khaley baper nam bhuley jai." He who smokes ganja forgets even his own father's name.

Regarding the difference between the results of bhang and ganja, there is another proverb:—"Sidhi khaley budhibarey; ganja khaley lukhy charey." The man who drinks bhang thrives; he who takes ganja goes to the bad (is deserted by the goddess Lukhi).

Note.—It is said in paragraph 500 of the report that "he was unable to answer the question regarding effects."

5.—J. F. P. McConnell, Professor of Materia Medica, &c., Medical College, Calcutta.—*Number of witness*—103.

Q. 1.—No special opportunities, only such as have arisen in connection with my duties as a Medical Officer serving in Lower Bengal for over 22 years.

Q. 42.—Except as a medicine, I consider their use, even in moderate doses, to be harmful.

6.—Upendra Nath Sen, Officiating Civil Medical Officer.—*Number of witness*—118.

Q. 1.—As a medical man and Superintendent of Jail, I had opportunities of obtaining information regarding matters connected with hemp drugs.

Q. 45.—Bronchitis and asthma are common complaints of ganja smokers.

Q. 46.—I believe habitual moderate or excessive use of ganja, like other forms of self-indulgence, grows into excess, and continued excess impairs the nervous system, throws the mind out of balance, and causes temporary insanity and undermines the constitution.

7.—Devendranath Roy, Teacher of Medical Jurisprudence, Campbell Medical School.—*Number of witness*—123.

Q. 1.—Being in Government service for over twenty years, I have been, among other places, in Rajputana, the North-Western Provinces, Behar, and Bengal, where

hemp drugs are used by a large portion of people. Latterly, since 1884, I have been in charge of a ward of the Campbell Hospital, where, among others, lunatics are treated, and many of them do use those drugs.

Q. 42.—I do not consider it harmless, because it affects the brain. Any agent which causes derangement of it by stupefying it cannot be harmless when such condition is produced habitually.

Q. 45.—*Those who smoke ganja not more than twice or thrice a day* and can afford to get good food *do not suffer in general health;* but the absence of good food will make the ganja smoker deteriorate in health. Mentally and morally all smokers fare alike. They become short-tempered and careless.

Bhang does not impair digestion, whereas ganja does.

Those of my patients who admitted of having been habitual ganja smokers suffered from dysentery or diarrhœa, but they had been exposed to conditions which produce those ailments. Hence I do not draw any conclusion as to ganja being the primary cause of those diseases.

Barring what I have indicated above, I have not seen a moderate ganja smoker becoming lazy or a debauch. Charas stupefies the smoker; hence he becomes indolent and dull to all moral sense.

I do not know of any instance of *moderate use* of hemp drugs producing actual insanity. But it should be remembered what I call moderate use, *i.e.*, two or three times a day.

Insanes who have no recorded ganja history do confess to the use of the drug. This confession comes when the patient is calm enough either to understand or to listen to what is said to him; otherwise nothing can be got out of them, even whether they are hungry or not.

The other portions of this question will be answered in reply to the next question.

I know of persons becoming insane after the use of intoxicating drugs, and ganja especially, and they had no hereditary predisposition.

I do not know of any case in which insanity predisposed to the use of it.

Persons deficient in self-control through weakened intellect will take to any intoxicating drink that they have facility to get, and will contract the habit of using it more easily than any other person.

Hemp, like other narcotics, is not used to soothe the brain. Dr. Reynolds speaks highly of Indian hemp as *sometimes* altogether removing pain in the head from a rare disease, cerebral tumour.

I know of people who, when very young, about 17 or 18 years old, contracted the habit of smoking ganja, and within a short time they became inveterate ganja smokers. After some four years or so they became insane temporarily. There was no family history of nervous disease of any sort.

Q. 53.—Excessive indulgence in ganja does incite to violent crime.

Oral.—If a man used any intoxicating drug often, I would accept that as a cause of the insanity; not necessarily the only cause. I should not consider it necessary to prove actual excess. If he took it habitually, that would be enough. The reason is that I have seen people of weak mind who, if they take any intoxicating drug, go to excess. Hence, when I get the history of any insane taking these drugs, I do not stop to enquire whether it is in excess or not.

8.—Hari Mohan Sen, Assistant Surgeon.—*Number of witness*—128.

Q. 1.—I have made a study of the subject with a view to determine the effects of the drug on the constitution of men. I have made personal investigations and examined cases.

Q. 41.—The fishermen, the boatmen, the dak-runners, the palki-bearers, and the sweepers consume ganja under the idea that it gives them staying-power under severe exertions or exposure and alleviates fatigue. It is a mistaken idea. It simply deadens the feelings and sensibilities. While under its influence a man may bring into use all the strength in him without feeling bad till all his strength is drained away, and he is left a complete wreck. Just as a man with a paralysed hand (the sensibility only being affected) would handle a piece of live charcoal till the hand is charred and dead and useless, he never feeling at any moment what had been coming on. This is the case with the insufficiently fed, poor, hard-working men. Those who can afford to eat up to the standard may keep off the injurious effects of the drug for a time, but ultimately they do succumb as well. I refer to the habitual use of the drug.

Q. 45.—Yes, ganja and charas particularly.

Ganja impairs the constitution in more than one way.

Yes.

Yes.

Yes; a ganja-smoker is never a moral being. He or she is generally a debauchee. He is active as long as he lasts.

It does not deaden the intellect altogether. It produces insanity of a violent type, which generally has a religious element in it. It is often permanent.

A man takes to ganja-smoking not with a hope to obtain relief from mental anxieties, but for forgetting his physical wants when he is ill-fed and hard-worked, or for driving away the heaviness from an unoccupied mind, or for stimulating the carnal desires when he has got more than enough to enjoy.

Q. 46.—Excessive ganja-smoking would occasionally cause temporary insanity, a mania of homicidal character. A man would commit murder under its influence. The habitual excessive use completely ruins a man, his intellect is gone, his moral faculties are dead, and his constitution is a wreck.

The effects of bhang-drinking on a man who never had it before are horrid. He never forgets them after he had experienced them once.

Q. 49.—Yes. It is so used by the prostitutes. Its use for this purpose is more injurious, or it has to be taken in less increasing doses to keep up the exciting effect till the excessive excitement ends in impotence as its just reaction.

Q. 51.—A large proportion of bad characters are habitual moderate consumers of ganja and siddhi. Moderate use deadens the moral faculty. Excessive use excites the will power to a high pitch and a man may commit any act of daring while so excited.

Q. 62.—It should be stopped as far as the Government is concerned. The people may cultivate a little for their private use or for medicinal purposes.

Q. 63.—The cultivation of the plant or the sale of the articles should not be in the hands of the Government. No countenance whatever should be given to the use of the drug.

Q. 64.—I asked a ganja-smoker why he did take to the use of it. He said because it was brought to him; otherwise he would never have sought it out.

Q. 68.—There are shops licensed for the sale of these drugs. These shops should be closed.

9.—Durga Dass Lahiri, Medical Practitioner.—*Number of witness*—132.

Q. 1.—From persons using hemp drugs.

Q. 45.—No.

No.
No.
No.
No. } *I have not seen any evil result mentioned when taken moderately, but it is very difficult to keep the moderation.*

Q. 46.—All the faculties—mental, physical, and moral—are impaired by the excessive use of the ganja-smoking.

Q. 50.—The excessive use of the drug produces impotency and other injurious effects.

10.—Bijoya Ratna Sen, Kaviraj.—*Number of witness*—151.

Q. 1.—My replies are based to a considerable extent on my own experience in connection with my professional attainments.

Q. 45.—*The habitual moderate use of ganja or charas, but not of siddhi, may in some cases produce* noxious effects, physically, mentally, and morally. It impairs the constitution. It injures the digestive power, and creates *dysentry, bronchitis, asthma*, &c. It also impairs the moral sense and induces laziness, immorality, and debauchery. It may also produce insanity both temporarily and permanently.

Q. 46.—The habitual excessive use of ganja and charas is generally found to cause all the above diseases.

11.—Ganga Pershad Sen, Kaviratna, Kaviraj.—*Number of witness*—152.

Q. 1.—My replies are based to a considerable extent on my own experience in connection with my professional attainments.

Q. 45.—The habitual moderate use of ganja or charas, but not of siddhi, may in some cases produce noxious effects, physically, mentally, and morally.

It impairs the constitution.

It injures the digestive power.

It creates bronchitis, dysentery, and asthma. It also impairs the moral sense and induces laziness, immorality, and debauchery.

It produces insanity, both temporarily and permanently,

Q. 46.—The habitual excessive use of ganja and charas is generally found to cause all the above diseases.

12.—D. Morison, M.B., C.M., M.D., Glasgow, Medical Missionary.—*Number of witness*—133.

Q. 1.—I have lived for about fifteen years in Rampore Bouleah, and have had occasion to give the matter some attention, medically, socially, and morally. I am acquainted with the medicinal properties of the drug, and have observed its effects physically and morally on some natives, in whom I am interested as head of this mission.

Q. 41.—The moderate use of ganja is not beneficial in any way whatever—

(*a*) It overstimulates the appetite, causing the smoker to gorge himself with food which he cannot digest, and thus leading to indigestion.

(*b*) It does give staying-power, but the reaction is severe. It demands the stimulant again, or the smoker is quite helpless and useless.

(*c*) It is never used as a febrifuge; indeed, if a ganja-smoker has an attack of fever, he dare not indulge in his usual pipe, as it aggravates his condition. The ganja-smoker is as liable to fever as others. It has no prophylactic power in malarious districts.

Q. 42.—I do not consider the smoking of ganja harmless even in moderation.

Q. 45.—(1) It impairs the physical organism, saps the muscular energy by overstimulation, and leads to loss of muscular vigour, producing emaciation.

(2) It produces severe constipation, which causes indigestion and impairment of the alimentary functions.

(3) The constipation leads to dysentery by retention of fœces in the bowel.

(4) In old smokers asthma and bronchitis are common, especially asthma.

(5) It utterly demoralizes a young lad.

Q. 52.—The smoker who uses the drug to excess will ruin his home by selling off his goats, cows, and effects rather than do without it. He thus becomes its slave, and may be induced by the craving to steal to supply his wants.

13.—Pyari Sankar Dass Gupta, L.M.S., Medical Practitioner, Secretary, Bogra Medical Society.—*Number of witness**—134.

Q. 1.—I am a medical practitioner, and have personally observed cases of ganja intoxication.

Q. 43.—Even moderate smokers get intoxicated, and their rude behaviour makes them repulsive to their neighbours.

Q. 45.—Its moderate habitual use is also attended with baneful results.

It undoubtedly produces injurious results to the constitution; even strong men are pulled down by its continual use. A lean, haggard, rude face, with eyes red and in the socket, a bony frame, indicates a ganja-smoker.

It first produces increased appetite, not satisfied by any food, and its long-continued use, loss of appetite.

Ganja-smokers generally die of bloody dysentery, asthma, and phthisis, and hæmoptysis, &c.

Ringer says: "Indulged in for a long time, it produces loss of strength, trembling, and much mental weakness."

Of all the ganja-smokers that I have seen, I have not seen any moral or religious man taking intelligent interest in any good subject.

It produces insanity, generally mania. Delusions of senses, a sort of dual consciousness, give succession to unsound mind. Healthy boys have been attacked after a debauch, and restored to health on discontinuing it. I have also seen a menial spending his last pie in the ganja shop.

Q. 46.—Excessive smokers generally ruin their health sooner, hastening their death, or soon getting into a state of *non compos mentis*, and become inmates of lunatic asylums, whose statistics will amply show the truth of the assertion.

In my opinion Indian hemp is a drug which has very few things to be spoken of in its favour, and its growth and use in any shape is an unmixed evil. It is true that it has certain medicinal properties, but it does not necessarily follow that it should be habitually used, for the most inveterate poisons are sometimes the most valuable restorers of life.

In conclusion, I beg to bring to the notice of the Commission that, as the mission of the benign English Government is to deliver a degraded people from centuries of degradation, it is high time to remove such a pernicious article from its patronage, and remove a temptation from the path of the misguided and weak people who are ruining their families and themselves by this most degrading habit. It is a scandal that such a pernicious thing is yet allowed to exist under so civilized, benevolent and Christian Government.

---

* NOTE.—The evidence of this witness is important and the whole is worth reading. Here an extract only has been given.

14.—Piyari Mohan Kaviraj, Native Physician.—*Number of witness*—154.

Q. 45.—Yes; it causes constipation, affects the brain, and consequently leads the consumer to commit acts of criminality.

Yes; it impairs the constitution.

Yes, it injures the digestion and finally causes loss of appetite.

Yes, *I know it causes dysentery, and I believe owing to its heating power it can cause bronchitis or asthma.*

Yes, it impairs the moral sense and induces laziness and habits of immorality, as it affects the brain.

I have come across several cases in which the excessive use of ganja and siddhi has produced insanity. In those cases it has appeared to me to be both the exciting and the predisposing cause. Insanity produced by it is of the same type as ordinary insanity. In some cases it was temporary and in others permanent. The symptoms may be re-induced by the use of the drug after liberation from restraint. Yes; persons deficient in self-control through weak intellect are most apt to get insanity by the use of hemp drugs.

15.—Dr. Mohammad Sadrul Haq, Medical Practitioner.—*Number of witness from*—139.

Q. 37.—There is no difference of any particular type in their injurious effects; but the effects of charas are more powerful and lasting and those of bhang are mild. Charas and ganja act on the brain and spinal cord, paralyzing more or less motor and sensory nerves; consequently the loss of energy, exertion, appetite, and sexual power, and also timidity, laziness, and emaciation, are their ultimate results.

Q. 41.—The use of any of these preparations have always been injurious.

(*a*) None of these is ever used as an accessory or digestive food.

(*b*) It does not produce staying power nor does it alleviate fatigue.

(*c*) They are never used as febrifuge.

Q. 42.—The use of these drugs is never without any harm.

Q. 45.—*Certainly they produce noxious effects on the moral and physical constitution.*

16.—Trailokya Nath Majumdar, L.M.S., Medical Practitioner.—*Number of witness*—140.

Q. 1.—From cases that have come under my observation in the capacity of a private citizen as well as a medical practitioner.

Q. 37.—Ganja-smoking cannot be easily given up, whilst the habit of drinking bhang can; the habit in the former case is more readily formed than in the latter.

Ganja-smoking is always injurious to health, whilst bhang is not so. On the other hand, bhang, if taken in moderate quantity, keeps the digestive organs in good order. Ganja has a tendency to deprave the morals of a man. Bhang does not do so. Ganja-smoking carried to excess causes in most cases insanity. Bhang does not affect the system so injuriously. Ganja has a tendency to affect the respiratory system, thereby causing in many cases asthma and bronchitis.

Q. 48.—In cases of insanity of a permanent nature, caused by excessive smoking, any issue after the insanity has become permanent may be similarly affected.

17.—Prasad Das Mallik, Doctor.—*Number of witness*—141.

Q. 1.—Special study, observation, and enquiry have furnished me with information regarding matters connected with hemp drugs, which forms the basis of my answers.

Q. 45.—Yes, it impairs the constitution after long use, causes loss of appetite and injures digestion. May be an indirect cause of bronchitis, dysentery, and asthma. Impairs the moral sense, induces laziness, and leads to insanity and debauchery. It deadens the intellect and produces insanity only in those who are predisposed to it or whose nervous system is weak and exciteable. The insanity is, as a rule, of the violent type and is temporary. The symptoms may be re-induced by use of the drug after liberation from restraint. A murderous propensity is a typical symptom of this form of insanity. Yes, insanes confess to the use of the drug, though they have no recorded ganja history.

Q 46.—The bad effects are more marked. Most cases of insanity are to be attributed to the habitual excessive use of ganja.

Q. 50.—The excessive use of any of these drugs leads to impotence.

18.—Nimai Charan Das, Medical Practitioner.—*Number of witness*—142.

Q. 45.—Yes; it impairs constitution.

Yes.

Yes.

Certainly it does.

Yes; they deaden the intellect and produce temporary insanity.

Q. 49.—Yes; they are used by the prostitutes as an aphrodisiac.

Hemp, if taken for a long time, produces impotence.

19.—Durga Nath Chakravarti, Assistant Surgeon in charge of Tongail Dispensary (Mymensingh).—*Number of witness*—150.

Q. 1.—I am a resident of Tongail and practising here for these fifteen years. Ganja consumption is very great here. I have seen many ganja-smokers myself.

Q. 42.—I do not think their moderate use to be beneficial and necessary. They are not essential for the sustenance of our health and life.

Q. 45.—Produces a tendency to take in excess.

No.

Ganja causes dysentery after a long use.

Generally not. Occasionally we meet such cases.

Yes. It is only after a long use. I saw only one case. It is of a permanent type. Temporary type is not rare. A man often forgets of his action under ganja when in sane moments.

Q. 46.—I have seen some twenty persons who became insane under excessive ganja-smoking. Some of them are raving mad. The madness is permanent. They get temporary excitements. Somewhere these excitements were due to the temporary abstinence of the drug and somewhere to their excessive use. In the neighbourhood of my residence a woman of middle class died from dysentery and was a hard ganja smoker. Her one son, a hard ganja smoker, became stark mad, and another son, a very good intelligent man, a few years since has become insane. They keep up intelligence and reasoning power except during excitement, but are incapable to conduct business and to manage their own affairs and cannot be in any way trusted.

20.—Tara Nath Bal, L.M.S., Medical Practitioner, Bengal.—*Number of witness*—143.

Q. 1.—As a medical practitioner I have had to come in contact with different classes of people from highest to lowest, from Rajah Maharajah to the meanest cultivator with whose habits and customs it is essential on my part to become thoroughly acquainted.

Q. 45.—Yes.

Yes.

It causes dysentery and bronchitis; a ganja-smoker generally (of course habitual consumer) dies of dysentery.

To a considerable extent.

Moderate use of the drug, particularly ganja, continuously may not utterly deaden the intellect, but certainly it is impaired considerably. It is an established fact, and supported by many an Indian authority on the subject, that ganja is one of the chief causes of insanity; in my opinion, it appears to be an exciting cause. Generally it produces insanity of a violent type. Majority of habitual consumers become permanently insane, never to be cured. Some become temporarily so, and become sane on breaking off the habit. Symptoms are apt to be re-induced on resuming the habit. I am aware of one person, by name Bhakta Poddar, in this district, who was a confirmed ganja smoker, to become insane under its continuous use, and he was not fit for any duty in life; but after some years I found him sane. On inquiry I learnt that some mental anxiety about some family matters tended to give rise to indulgence in the use of ganja. I am not in a position to declare positively whether this question has been sufficiently considered in explaining the connection between insanity and the use of ganja.

Q. 46.—To this question I should reply that what has been said about the habitual moderate use of the drug (ganja) on the consumers appears in the aggravated form in cases of habitual excessive use, and the effects apt to be more rapid in these cases.

Q. 57.—(*a*).As a nearly permanent resident of the district I am in a position to say, both from information obtained through reliable sources and from personal observation, that the use of ganja is very extensive in the district among low class people. I am of opinion that bhang is less injurious than ganja, and it is rarely apt to be taken to excess. Under several heads I have expressed opinions regarding effects on human beings produced by the moderate and excessive use of the drug habitually—opinions formed by study of pharmacology, personal observation, and occasionally experiment on my own person and from all these I am led to believe that these drugs, except for *bonâ fide* medicinal purposes, are more or less injurious in their effects on the human body.

21.—Nocoor Chander Banerji, Medical Practitioner.—*Number of witness*—144.

Q. 1.—I was in the medical service of Government and am now in medical practice. More than 26 years have passed away during which I am engaged in medical profession.

Q. 42.—Moderate use is beneficial under such conditions, but through the continued use it becomes harmful. There is another danger, as from the moderate use it leads to excessive consumption, and is thus productive of the pathogenetic effects of the drugs.

45. Yes; the habitual moderate use of any of these drugs produces noxious effects. It impairs constitution, injures digestion, or causes loss of appetite. It causes bronchitis, dysentery, and asthma. It impairs moral sense, induces laziness, and habits of debauchery are formed. It produces ill-effects on the brain, producing insanity. It might prove as an exciting cause of insanity where there is heredity of the disease.

(*Note.*—The witness has cited several cases.)

22.—Luchmy Narain Naik, Medical Practitioner.—*Number of witness*—145.

Q. 1.—I was educated in the Government Medical School at Cuttack, and got the diploma of V. L. M. S. (Vernacular Class Hospital Assistant). I am 32 years of age, and I have been practising medicine for the last ten years privately.

Q. 42.—It is not at all beneficial; on the contrary harmful, as it disturbs the proper actions and disorganizes the proper functions of some useful organs.

Q. 45.—Yes, it produces noxious effects mentally, morally, and physically. It affects the lungs and also produces insanity, which has been mentioned above. I am told a man in the habit of smoking ganja murdered his mother just after smoking, and afterwards, when the reaction set in, looking at the stream of blood flowing from his wounded mother, went to murder the man by whom he was induced to the habit of smoking ganja.

Q. 45.—Moderate use of ganja leads to the excessive use. *The habitual moderate consumers as well as the excessive consumers suffer in their lungs and become insane.* My definition of a moderate consumer is a man who takes as much as his habit has enabled him to stand without becoming insensible. A man who takes two pice worth is moderate, and a man who takes two annas worth may be moderate for him, *i.e.*, if he can stand it. *No intoxicant can be taken in moderation except when administered medicinally.*

23.—Surgeon-Captain J. C. Vaughan, T. G. Charles, Esq., District Superintendent of Police, Haji Imdad Ali, Sub-Committee District Board, Monghyr.—*Number of witness*—250.

Q. 45.—The habitual moderate use of bhang is held to be not injurious.

With regard to ganja—

(*a*) It affects the physique and gradually impairs digestion. If moderately used, increases appetite. Without proper food must weaken digestion; causes dysentery if used in excess. Produces laziness, but not immorality or debauchery.

If used in excess, deadens the intellect and produces insanity of a permanent type: sometimes with melancholia and other times with a homicidal tendency.

24.—Girish Chandar De, L.M.S.—*Number of witness*—237.

I have seen so much of the evils caused by the drugs that restriction appears to me necessary. I have found people become pale and emaciated on beginning to smoke ganja, and after three or four months to become thoroughly changed for the worse, mentally and physically. I judge that these are the effects of the drug, because people before using the drugs were healthy and bright and intelligent. I have seen their effects in members of families I have visited in the course of my practice. I can remember at least a dozen cases which showed the above changes in three months. All these were sons of families I visited, and, except in one case, the other members of the families did not smoke. The young men were scapegraces, who had taken to evil courses against the will of their families.

Kalighat is probably worse than any other part of Calcutta in the matter of ganja-smoking, and it is the evil effects I have seen there which make my heart bleed and make me wish to lay my views regarding restriction before Government.

Ganja is worse than alcohol. Alcohol does not make people so utterly useless and worthless as ganja does, at least among respectable families. Among the lower classes also, I think, ganja is the more harmful. This is my experience in Kalighat.

Punjab.

1.—Surgeon-Major J. A. Cunningham, M.D., I.M.S., Civil Surgeon.—*Number of witness*—35.

Q. 1.—I have been for six months in charge of the lunatic asylum at Delhi, 18 months in charge of that at Lahore, and have been for over twelve years in the service in India.

Q. 42.—I consider the moderate habitual use of hemp drugs to be harmful. I consider the tendency to be towards excess; and excessive use is certainly productive of insanity in persons probably predisposed. The habitual use of hemp drugs leads to wasting of the tissues either by its direct action or from insufficient food being taken. It also predisposes to, or causes, chest affections

Q. 45.—The habitual moderate use in a person liable to insanity would tend to bring on insanity.

It also tends to wasting of the tissues and emaciation. No moral defects. The constitution is weakened.

Charas and ganja smoked would impair digestion. *Charas and ganja smoked cause chest affections, but not "dysentery."*

It would induce laziness and want of thrift, which is a moral defect. Would not induce active immorality or debauchery.

It dulls the intellect, and in predisposed persons produces insanity of the mania type, usually temporary, unless some organic cause also exists. In temporary cases symptoms would be reinduced by use of the drug. There are no special symptoms. Insanes who were addicted to the use of the drug admit it and crave for it.

I do not think that the moderate use of the drug would induce insanity in a person of strong and healthy intellect, but in unstable people I think it might do so.

I do not think that weakness of intellect often leads to the use of the drug in this country; but, when such people use it, they are likely to lose their balance.

Having severed my connection with lunatic asylums before the appointment of this Commission, I made no special enquiries or investigations on this point, and my impressions gained during ordinary observation guide me in the opinions above expressed.

Q. 46.—The excessive use of the drugs would have a much greater and more deleterious effect than the moderate use, and would probably be quite sufficient to cause insanity or serious disease in originally quite healthy people. It would greatly impair moral sense and tend to debauchery, just as excessive indulgence in alcohol notoriously does.

The use of the drugs tends to produce impotence.

2.—Rahim Khan, Khan Bahadur, Honorary Surgeon, Superintendent, Medical School, Lahore.—*Number of witness*—37.

Q. 1.—My long residence in the Punjab (33 years), and my connection with the out door department of the Lahore Medical College Hospital for the same period, have afforded me ample opportunities of obtaining information regarding the uses and effects and other matters in connection with hemp drugs.

Q. 45.—*Charas.*—*Even the* habitual *moderate use of charas brings on chest affection,* and incapacitates the consumer for work.

Mentally, charas impairs the intellect, and may bring on insanity.

Morally, it makes him despicable and shameless, and, being incapable for work, he either takes to thieving or begging alms.

When charas produces insanity it is generally temporary, and the symptoms may be re-induced by use of the drug after liberation from restraint. The insanity is of the type of melancholia or dementia. There are no typical symptoms that I know of.

Q. 46.—Since the habitual moderate use of charas is injurious physically and morally, the habitual excessive use of the drug must bring on those symptoms in an aggravated. form and in less time.

Oral 45.—I do believe that even the moderate use of charas may cause insanity The basis of this opinion is that in my experience "charasis," as a rule, become very irritable. *I call ten or twelve chillums, costing one or two annas in the 24 hours moderate use. I know of no more moderate use than that. I know of no case of a man using only one or two chillums a day. I would call a man taking one or two annas worth a day a "charasi."*

3.—Surgeon-Major Geo. Dennys, Superintendent of the Lunatic Asylum at Delhi.—*Number of witness*—34.

Q. 1.—I have been a Civil Surgeon in the Punjab during the last 11½ years, and for the last three years have held charge of the lunatic asylum at Delhi. In the latter appointment I have had exceptional opportunities of studying the symptoms of toxic insanity due to the use of hemp drugs.

Q. 42.—I have known several natives who occasionally indulged in bhang as a drink and seem to be none the worse for it. Charas-smokers, on the contrary, nearly always appear more or less weak-minded, have bad memories, and are eccentric in their habits, if not actually insane.

Q. 45.—Charas-smokers, even in moderation, are generally emaciated and in poor health, and are depraved creatures both mentally and physically. This is not the case with moderate consumers of bhang as far as I have been able to gather. The excessive habitual use of charas and bhang does, in my opinion, tend to produce insanity in individuals who have a predisposition that way, but I do not think the drug would cause insanity in every case, even when indulged in very largely. It is the exciting cause, not the predisposing cause. The insanity is nearly of an excitable noisy kind. The patient talks incoherently, is restless, sings or weeps, and is never still for a moment. He has no particular delusions or hallucinations, but loses all sense of modesty and decency, is filthy in his habits, and often abusive and violent, though I have never known a lunatic of this kind do any actual harm to any one.

He is seldom or never homicidally or suicidally inclined. There are no symptoms peculiar to this form of insanity. The large proportion of cases I have seen were people of low caste and with little or no education. I do not think mental disease or anxiety tends to make a man resort to hemp. Toxic insanes always readily admit having used the drug. The insanity is temporary and the patients always recover if kept away from the drug, but there is tendency to a return to the habit when released from the asylum, and in such cases the patient generally becomes insane again after a short time.

Q. 53. Oral.—[My two papers may be amalgamated as one.] For "insane" the word "weak-minded" should be substituted. My experience of charas-smokers is in the asylum and in the jails. In the jails I find them utterly useless. The man tells you he smokes because he hopes to get off work, for a charas-smoker is a useless man with rotten physique: he is emaciated and unfit for hard labour. My remark applies to moderate as well as excessive smokers. I know a fakir who professes to be a moderate smoker. I do not know where to draw the line between moderate and immoderate. It really depends on how often and how rapidly a man inhales the smoke from his chillum.

4.—Surgeon-Major T. E. L. Bate, Inspector-General of Prisons, Punjab.—*Number of witness*—32.

Q 45.—While in charge of the Delhi Lunatic Asylum I saw many cases of insanity in which the patients and their friends attributed the condition to the use of one or other of these drugs. In my experience such cases recover quickly. I believe that mental anxiety, excessive ganja or charas smoking, and insanity constitute a not uncommon sequence of events. Persons suffering from mania induced by the use of these drugs are generally talkative and not uncommonly indecent in their behaviour. Many of the persons I saw suffering from the use of these drugs were of distinctly weak intellect, but I am unable to say to what extent this condition was natural or induced by the practice.

Q. 47.—There can, I believe, be no doubt that the excessive use of these drugs is distinctly harmful. Charas-smokers not uncommonly present a very cachectic appearance; but it is difficult to say how far this may be due to the habit or to some other condition of life. It may often be the case of a weakly individual taking to a habit for the temporary relief or strength it affords him.

Q. 48.—I believe the *habitual excessive use* of these drugs renders the consumers more or less impotent. Excessive charas-smokers commonly remain celibate.

5.—Dr. H. M. Clark.—*Number of witness*—46.

I am a Doctor of Medicine and Master of Surgery of the University of Edinburgh. My experience of India is confined to the Central Punjab. I have been a medical missionary in connection with the Church Missionary Society since 1882 with my head quarters at Amritsar, and have done a great deal of work in the villages of the Amritsar and parts of the Sialkot and Gurdaspur districts.

The hemp drugs are true narcotics like alcohol and opium. As far as my experience goes, the effects of hemp are always and altogether bad. It is neither a food nor a work-producer. It is a stimulant of the worst sort. If it is smoked in the form of charas, its effects are very much more speedy and the ruin more complete than if it is drunk or eaten as bhang or majum. Majum is the least deleterious of the three as it is eaten, while bhang is drunk and charas smoked. I can find no other word to describe the effects of charas than that they are frightful. It is ruinous mentally, morally, and physically. It produces a peculiar emaciation which can never be forgotten when once seen. It is largely a determining cause of insanity in this country. The effects of the drug as eaten and drunk do not appear so soon and are not so well marked, though they are the same in kind. All, if persisted in, produce ruin in the man.

As regards charas, I think there can be no such thing as moderate use, if we mean such use as will not leave any permanent bad effect on the system. In whatever quantity it is used it is bound to be deleterious. My experience is probably wider among the private life of the people than among patients at dispensaries. The former sort of intercourse has been principally in the villages, because it is there that I meet fakirs and devotees, who are the chief consumers. The peasantry do not use the drug to any large extent.

My impressions are based both on my experience and my medical knowledge. My experience of the effects of charas is mainly derived from cases of consumption by fakirs and other religious devotees. I have not had any of these persons under prolonged observation, but I have observed them long enough to form an estimate of their health.

I believe it is possible to use bhang and majum in moderation and without bad effects; but from what I have seen I cannot believe that a moderate use of charas is possible. I have known men to use bhang quite moderately.

6.—Thakur Das, Rai Bahadur, Assistant Surgeon.—*Number of witness*—39.

Q. 45.—Moderate habitual use of bhang is probably quite free from any noxious effects—physically, morally, or mentally.

Not bhang.

Not bhang, *but abuse of charas brings on bronchitis and asthma.*

No; except probably slight laziness in those who already enjoy sedentary habits.

Long-continued use of charas contributes a fair proportion to the inmates of lunatic asylums. They are generally maniacs, and in many cases it is temporary. The symptoms may be reinduced by use of the drug. I have known insanes confess use of charas.

In mental anxiety and brain diseases bhang is useful for its soothing effects.

7.—Rai Bahadur Mehr Chand, Assistant Surgeon.—*Number of witness*—40.

Q. 1.—I have been in Jullunder and Amritsar districts for the past eighteen years, where I obtained information regarding matters connected with hemp drugs.

Q. 42.—The moderate use of bhang is not injurious, and it produces no ill-effects on the vital organs of the body.

Charas is injurious because it affects the brain primarily and the general constitution secondarily.

Q. 43.—Moderate consumers of bhang are inoffensive to their neighbours. Charas-smokers are, no doubt, a nuisance to the public.

Q. 45.—The moderate use of bhang produces no noxious effect. Charas, if used moderately, is very injurious. It produces general weakness of the brain, leading to insomnia, impairs vision; *brings on bronchitis and asthma, and general irritation of the respiratory organs, indigestion and dysentery.* It impairs moral sense and induces laziness. It deadens intellect, and in some cases causes insanity, melancholia, and, in a few cases, mania. In many cases the insanity is temporary, while in a few it is permanent. If temporary, the symptoms are again brought on by use of the drug. After liberation from restraint the symptoms are generally of melancholic nature. The people in this province don't use ganja, as insanity is specially due to charas-smoking. I don't know any cases of insanity relieved by the use of hemp; nor do I know any cases in which insanity brought on indulgence in the use of hemp by a person of weakened intellect.

Q. 46.—The excessive use, even of bhang, would lead to the symptoms mentioned in answer to question 45, and the excessive use of charas would produce the worst results as stated above.

Q. 45. Oral.—The moderate use of charas may exceptionally produce insanity; but my remarks as to effects refer mainly to the excessive use. Moderate use would only produce insanity in the case of persons with weak intellect. By that I mean taking the drug to the extent of one or two chillums.

My experience is based on persons coming as patients to the hospital. *As to dysentery, I saw a case of a man who said he was a charas-smoker, and took an excessive dose, and it brought on dysentery. I had doubts as to this being the cause. But I think charas may injure the digestion and predispose to diarrhœa or dysentery. I have not enough of cases to be able to say that the drug really produces dysentery. I am not certain. But I have had a case or two with allegations as to this being the cause, and I had no other cause. I ought to say rather "it may produce" than "it does produce" dysentery.*

8.—Jassa Ram, Hospital Assistant.—*Number of witness*—42.

Q. 1.—I am serving in the Dera Ghazi Khan district as native doctor since the last thirty years. My information is based on local knowledge and on personal experience gained by coming in contact with the general public.

Q. 45.—Charas-smoking causes asthma, loss of appetite, and brain diseases. It also induces debauchery.

Q. 46.—The excessive charas-smoking dims the eyesight, causes general debility. The same is the case with bhang. Laziness and forgetfulness follow as a matter of course. The excessive consumer of bhang or charas cannot even earn his livelihood to satisfy his wants.

Q. 49.—The moderate consumption of bhang or charas is sometimes certainly practised as an aphrodisiac by prostitutes and immoral women. The use of the hemp plant produces impotency.

9.—Jhande Khan, Hospital Assistant, No. 57, City New Branch Dispensary.—*Number of witness*—43.

Q. 1.—In private practice I have often treated patients who were habitual consumers of the drugs (bhang, charas and ganja), and am therefore in a position to answer the question by my personal experience.

Q. 44.—The use of these three drugs produces intoxication, makes the head giddy, creates appetite and refreshes the consumers. The lasting of the intoxication depends upon the quantity used and the habits of the consumers.

Q. 45.—*The moderate use of these drugs is likely to produce injurious effects*—physical, mental, and moral.

Yes; the body becomes emaciated and weak.

It first sharpens the appetite and afterwards injures digestion.

Yes.

Yes; but it does not produce the habit of debauchery.

Yes.

Yes; it first produces temporary insanity, which is the cause of developing into permanent insanity afterwards. The lunatics, after their release from the lunatic asylums, are liable to become insane again by the use of these drugs. Such lunatics are in the habit of laughing much, and this disease is called "laughing insanity."

Q. 46.—The habitual excessive consumers become quite worthless and mad.

Q. 49.—No; the prostitutes often use it as a sedative. The use of hemp produces impotence.

Q. 56.—Moderation also produces injurious effects, and there is a tendency for excess, the consequences of which are worse than those of the former.

10.—Ram Narain, Assistant Surgeon, Delhi.—*Number of witness*—41.

Q. 42.—Habitual use of either of these drugs even in moderation, affects the mind to some extent. I know a good many of the habitual consumers, and I have noticed that they are dull headed and have bad memories. Several of them are eccentric and seem to have some aberration of mind.

Q. 45. *The charas smokers* (even moderate) do not look strong and healthy. As the use of this is among the low classes, whose morals are doubtful even prior to its use, it cannot be said with certainty whether charas-smoking causes immorality, sometimes seen in them, or the influence of society. Their mental powers become deranged, and *bronchitis and asthma are also often met with in them.*

Excessive use of charas produces lung affections and insanity. I have seen many charasis who, though not so insane and violent as to be kept in a lunatic asylum, have some mental aberration. They wander about the city and wherever they find any party of charasis mix with them and smoke. They keep themselves on begging. Some of these are considered to be men who have acquired supernatural powers. They are called fakirs of the high order and worshipped wherever they go.

In connection with the use of these drugs and the insanity, I may mention the case of a man whom I know from my boyhood and who lives in the same street where I live. He is a Brahmin by caste, and his name is Gojar. He has been several times in Delhi lunatic asylum. He was a very strong man before he commenced charas-smoking (a regular pahlwan and athletic). For several years he smoked charas and drunk bhang as well, and then began to show symptoms of insanity. These were at first very wild, and he was quite inoffensive. When he became violent he was sent to the lunatic asylum, from where he returned several times as cured. But soon after his return he began smoking charas and again became maniac.

His insanity now is periodic and the symptoms of insanity are re-induced by the use of charas. When he is all right he does his work very well and speaks very civilly to every body. The first symptoms of the disease shown by his considering himself a king or a god, and by his going to Marghat, a place near Jumna river, where Hindus burn their dead bodies.

11.—Assistant Surgeon Sahib Ditta, Government service, in medical charge of hospital, Multan.—*Number of witness*—38.

Q. 1.—During my service of over 26 years I have known many a people who consume hemp drugs (bhang particularly).

Q. 45.—Yes, ganja and charas do, but not bhang.

Yes, ganja and charas do.

Yes, ganja and charas do.

Not known.

Ganja and charas, it is said, do.

Yes, it is said so.

Q. 49.—Yes, ganja and charas tend to produce impotence.

Q. 51.—Yes, bad characters in large towns are often moderate habitual consumers of bhang, charas, &c.

12.—Karm Elahi, Hospital Assistant, Lahore.—*Number of witness*—44.

Q. 1.—By practice of 25 years, out of which for 13 years I have had charge of the Civil Hospital at Jhelum with a population of 16,000 souls.

Q. 42.—The habit of moderate use of these drugs is not without a harm. The habit of these drugs weakens the constitution and energy and makes lazy. The subjects of the habit become indifferent in temper. Their faces become withered up and pale, eyes peculiar and not fully attentive to their work. But bhang does not affect the system to such extent as ganja and charas.

Q. 45.—Yes; *the moderate use of these drugs to some extent produce the noxious effects*, physical, mental, and moral.

Yes; it weakens the constitution.

Yes; it injures the digestion and causes loss of appetite subsequently.

I have not seen a single case of dysentery caused by the practice; of course, cases of chronic *cough and asthma.* Yes; it impairs the moral senses and induces laziness or habit of immorality or debauchery, whether through the influence of the drug or of the society. Yes; it affects the intellects and to some extent is productive of insanity, if taken in large quantity and for a long time. Under these circumstances, as far as I can think, it serves as an exciting cause, because the insanity has only been noticed amongst men previously indifferent in temper or rather of melancholy appearance.

13.—Gopal Dass, Hospital Assistant and Deputy Superintendent, Lunatic Asylum, Delhi.—*Number of witness*—45.

Q. 1.—I have been a Hospital Assistant in Punjab during the last 19 years, and for the last 16 months have held charge of the Lunatic Asylum, Delhi.

Q. 42.—The daily use of all these drugs is injurious to mental-physical strength of the human body.

Q. 45.—The charas-smokers are generally emaciated and weaker, and depress their intellectual powers. This always produces cough and loss of appetite. It impairs the moral sense and induces habit of immorality. All kinds of hemp drugs can produce insanity. In some cases it becomes an exciting cause and in others a predisposing cause of insanity.

It produces temporary insanity, not permanent. The symptoms can be re-induced by use of the drug after release from the asylum, and several lunatics of this kind are re-admitted in the asylum many times.

The insanity is always of an excitable and noisy kind; the patient sometimes sings and at other times weeps.

Q. 46. The habitual and excessive use of charas certainly produces toxic insanity.

14.—Babu Hem Chandra Sen, L.M.S., Medical Practitioner.—*Number of witness*—48.

Q. 1.—I have had frequent occasions to treat confirmed charas-smokers, and cases of insanity brought about by ganja-smoking as well as cases of bhang-poisoning with dhatura.

Q. 42.—These drugs are never harmless, as they gradually produce seminal weakness and deaden the intellectual faculties. These effects are produced gradually by constant use, as we find it makes people unfit for work, physical or mental.

Q. 45.—The habitual moderate use of these drugs, when taken in moderation, are found to impair the constitution physically by causing depression of spirits; it brings on languor and lassitude. *Charas and ganja always bring on bronchitis and asthma if very large quantities are smoked. It brings on dysentery also.* It first of all produces false appetite, but gradually spoils digestion. Only we do not find bhang consumers suffer much for want of appetite. But this much is to be said, that there is always moral depravity in the case of charas and ganja, but not so much in the case of bhang. As for charas and ganja being the exciting cause of insanity, I know three or four cases; but in one case I know there was no other predisposing cause also. But insanity is in these cases generally temporary; but, if not properly taken care of, it becomes permanent. Can't say whether the use of these drugs would bring on the return of insanity or not, as it has never been tried, and as for insanity causing a tendency to the use of the drug I know nothing.

15.—Mathra Das, Medical Practitioner.—*Number of witness*—49.

Q. 1.—I have for about forty years practised as a physician, and have frequently had under my treatment patients suffering from injuries caused by such intoxicant drugs.

I knew the antecedents of those patients, and am therefore acquainted with the good or bad effects of the drugs.

Q. 45.—The consumption of the drug, whether moderate or excessive, is productive of evil results—physical, intellectual, and moral.

It has on many an occasion come under observation that the bodies of charas-smokers, though stout and strong (originally) become gradually emaciated and lean notwithstanding their taking rich diet. Their complexion grows pale, as if no blood were left in the body, and they become feeble. It (charas) also impairs the intellect and affects the understanding.

The use of bhang does not alter the complexion of the face, but brings about all other consequences.

Unlike charas, bhang does not impair the appetite.

Diarrhœa is not induced by either bhang or charas.

Asthma and cough are caused by charas in consequence of its affecting the lungs.

Their use impairs the moral sense and leads to idleness and debauchery. Bhang impairs the intellect, and charas destroys it altogether and brings about insanity. Four persons have here become insane through the use of bhang, and three persons through charas. It does also cause a predisposition to insanity. One who becomes insane through the use of bhang is very timorous and is inoffensive to others. He fears lest some one should kill him. Such insane persons have been seen chattering about religious matters and are called *kutrab.* Those suffering from insanity induced by charas have been seen prating much and angrily, even using abusive language and causing trouble. They are styled *mania* (? maniacs). Insanity continues so long as the drug is used. The patient recovers in a few days after giving up the use of the drug. Insanity would be reinduced if the use of the drug were again resorted to.

During early stages, while they are yet in possession of their intellect, they confess their use of the drugs.

The drug has nothing to do with the diseases of the brain, but is most injurious, as noted already in the foregoing part (of this answer), in connection with its effect on the intellect.

In cases of sangrehni (a peculiar form of diarrhœa), indeed, its habitual use is beneficial.

16.—Pandit Mahadeo, Hakim.—*Number of witness*—50.

Q. 45.—Their long use weakens the system and produces dryness in the brain and body, and generally destroys the manhood of a person. The use of charas often creates cough and dama (asthma) and reduces the man's intellects. It often produces lunacy, and if its use be continued, this disease often becomes incurable.

17.—Hakim Salimulla, care of Alimulla, Native Physician and service.—*Number of witness*—51.

Q. 45.—(*b*) Charas, however moderately smoked, is immediately injurious to the power of discernment and to the internal organs.

It certainly improves the digestive power; *but produces* cowardice, *asthma and bronchitis.* After smoking it the consumer at once becomes passive. Although the intoxication of charas does not last so long as that of bhang does, yet it impairs the intellect, disturbs the mind, induces craziness, brings about sleeplessness, and produces headache and delirium. The consumer of this drug, though not discourageous, becomes coward. *It does not cause dysentery.*

Whatever benefit can be derived from the use of these two drugs depends upon good diet; otherwise the consumer of these drugs is sure to become subject to insanity or mania, the difference being that the consumers of charas are more liable to those diseases than those addicted to bhang.

I have treated several such patients who were cured completely, and in whom the symptoms were not re-induced until they again had recourse to bhang or charas.

I know nothing about ganja. I am convinced that the use of bhang or charas is not commenced by the consumers in connection with their mental anxiety or brain disease. On the contrary, the habit is originated in bad company, or in the society of fakirs, or for some religious purpose.

The Sikhs use bhang as a substitute for tobacco, which is religiously forbidden to them, and consequently they cannot smoke charas.

Mental or brain diseases are well known to the native physicians, who never prescribe bhang in their treatment of these diseases

The medicinal use of bhang allowed by Hindi physicians is confined to the improvement of physical strength only.

Q. 46.—The habitual excessive use of these drugs produces noxious effects on the body.

It causes debility, shivering of limbs, weakness of nerves, delirium, insanity, anguish of mind, mania, cowardice, laziness, loss of appetite, and sexual power.

It deadens the intellect, injures digestion, blackens the blood and complexion, and weakens the retentive power. If the consumer is cured of the above symptoms, they are re-induced to some extent by the use of bhang as soon as restraint is removed, but not so much as in the case of charas.

18.—Pundit Janardhan, Baid, Hakim.—*Number of witness*—53.

Q. 1.—I have been practising as a baid for the last 34 years, and during this period I have had several opportunities of acquainting myself with the effects of these drugs.

Q. 42.—The use of almost all the intoxicants is injurious except when used medicinally.

Q. 45.—All *the mischief is done by charas and ganja.*

Q. 46.—The consumers of charas and ganja become lazy, remain in a dirty state, and pass their days like vagrants.

Q. 52.—Excessive use of charas and ganja is very bad and injurious.

19.—Shah Newaz, Hakim.—*Number of witness*—55.

Q. 1.—I have acquired my knowledge regarding the hemp drugs—bhang, ganja, charas—from my tutors and from Unanee medical works, and from my own observations.

Q. 45.—The following are the evil consequences of moderate habitual use of charas and bhang. The subject becomes proud and cruel; his eyesight becomes weak. There is melancholia, fear, and confusion of intellect. Its effects on the brain are insanity, hallucinations, evil thoughts, immoral thoughts, hatred of society of good men, irrelevant talking. Charas and bhang produce many injurious effects on body, for instance, impotency, dropsy, headache, windiness, flatulency of the belly, and mia and edima of the limbs and face, change of colour of the countenance, dropping off of the teeth, and general debility, which together impair digestion. Some persons get diarrhœa, cough, and asthma, and they become immoral also. In the commencement the consumer is led to debauchery. In my opinion insanity is the result, but the insanity is not permanent, but the symptoms are re-induced by use of the drug after liberation from restraint.

STATEMENT IV.—*Opinion of some witnesses on crime.* (*Para. 64 of the note.*)

Bengal (Crime).

1.—D. R. Lyall, Member of Board of Revenue.—*Number of witness*—1.

Q. 1.—I have been in the service of Government for nearly 32 years.

Q. 51.—My experience is that most bad characters consume ganja. I hold that in itself ganja does not dispose to crime; but it may strengthen the will to commit crime if it is already there. I do not know that the moderate use of ganja is connected with any particular form of crime.

Q. 52.—The above applies generally. Men under ganja sometimes commit murder; but it is hard to say how far the ganja is responsible.

Q. 53.—Generally premeditated. I have known cases of temporary homicidal frenzy.

Q. 51.—Oral The opinion given in this answer is largely based on opinions arrived at by Dr. Wise, who made experiments with the drugs when he was Civil Surgeon of Dacca. My meaning is that hemp would intensify a desire in a man's mind to commit a certain crime. Dr. Wise collected evidence from which he concluded that hemp strengthened a man's desires, criminal or other. I have tried to get Dr. Wise's notes, but am sorry I failed to do so. I can give no examples to illustrate my answers Nos. 52 and 53. They convey a general impression, and I cannot recall any individual case. It is a long time since I had to do with magisterial work.

1-B.—Mr. H. C. Williams, I.C.S.—*Number of witness*—13.

Q. 1.—I have been over twenty-two years in the service.

Q. 35.—I call this drug a curse to the country on account of what it does in the way of producing crime. It was not in connection with insanity, but mainly in connection with crime that I thus wrote.

2.—William Colebrooke Taylor, Special Deputy Collector, &c., &c.—*Number of witness*—36.

Q. 1.—About 47 years' residence in India, including 33 years as Assistant Commissioner, Deputy Magistrate, &c., spent chiefly in the mofussil, where I was in charge of subdivisions with management of Abkari or Excise matters since 1866 in Orissa.

Q. 51.—Yes; bad characters are usually ganja-smokers and takers of bhang. I cannot say what connection the moderate use of these drugs has with crime.

Q. 52.—Same as 51, but to greater extent.

Q. 53 & 54.—The numerous cases of what is called running amok which occur in India are often, if not always due to excessive doses of ganja and bhang taken with or without admixture of dhatura seeds (*dhatura stramonium*).

3.—Mr. G. E. Manisty, Collector of Saran.—*Number of witness*—19.

Q. 51.—Generally bad characters of low class people are addicted to it. Moderate use does not produce any crime.

Q. 52.—But when used in excess it leads men to commit crime.

Q. 53.—Excessive indulgence of ganja or bhang may incite to unpremeditated crime, violent or otherwise. I am not aware of any case in which it has led to temporary homicidal tendency.

4.—Mr. H. G. Cooke, Officiating Commissioner.—*Number of witness*—8.

Q. 1.—Nineteen years' actual residence, in which I have served in 21 districts in Lower Bengal.

Q. 52.—It is alleged that devotion to this habit leads men to steal in order to gratify the propensity. I do not think that it can be alleged that their excessive use can be associated with other forms of crime, except those of violence.

Q. 53.—Undoubtedly I believe I am right in saying that lunatic asylums are full of such cases.

Q. 54—It is not improbable that they may be used by rioters before a riot, but it would not be easy to prove this.

5.—Mr. C. Fasson, District Superintendent of Police.—*Number of witness*—87.

Q. 1.—As District Superintendent of Police of Bogra, in parts of which ganja is cultivated, in which also the wild bhang grows.

Q. 51.—Yes, a large proportion; but this is attributed, first, to debauchery and evil companionship resulting from the use of the drug; and, second, to the additional expenditure incurred in obtaining the nourishing food, which is a necessity to a ganja-smoker and which impells him to theft, &c.

6.—Mr. F. H. Tucker, Superintendent of Police.—*Number of witness*—88.

Q. 52.—Yes ; ganja makes a man irritable and headstrong, and leads the excessive smoker to any sort of rash doing.

Q. 53.—Yes, excessive indulgence in ganja incites a man to unpremeditated crime, the effects of rashness and violence of temper caused by smoking it.

7.—Rai Radha Govinda, Rai Sahib Bahadur.—*Number of witness*—166.

Q. 1.—Had had contact with persons who use the drugs.

Q. 53.—Excessive use of ganja incites unpremeditated crime.

8.—Maharaja Girija Nath Roy, Bahadur, Zamindar.—*Number of witness*—161.

Q. 51 & 52.—A large proportion of bad characters is either moderate or excessive consumers of these drugs. The consumption of these narcotic drugs has no direct connection with crimes of any general or specific character.

9.—Jogendra Nath Bandyopadyay Vidyabhusan, M.A., Deputy Magistrate and Deputy Collector.—*Number of witness*—50.

Q. 1.—I have derived my experience as the Excise Deputy Collector of the District and as a general enquirer of the subject.

Q. 51.—A certain proportion of bad characters are habitual moderate consumers of these drugs, but the proportion is not very large.

Q. 52.—But the persons who are addicted to excessive use of any of these drugs are generally of bad characters.

Q. 53.—An excessive indulgence in any of these drugs leads to unpremeditated crime, violent or otherwise.

10.—Taraprosanna Roy, Chemical Examiner to the Government of Bengal.—*Number of witness*—116.

Q. 52.—The excessive use of the drugs is common among budmashes.

Q. 53.—People indulging in excessive use of ganja may become violent and commit crimes. They are sometimes affected with homicidal frenzy and run amok.

11.—Umagati Roy, B.L., and Secretary to the Jalpaiguri Branch, Indian Association.—*Number of witness*—232.

Q. 1.—The source of my information is partly based on my experience and partly on the information I have received from time to time from the persons concerned.

Q. 52.—The excessive use of ganja and bhang has connection with crimes relating to properties, human life, and public peace. The excessive smoker having exhausted his resources, and having yet a strong craving for the use of ganja, has to satisfy the same by means fair or foul, and he has, therefore, to secure money by theft, and he is likely to commit a breach of the peace and offences relating to human life when under the influence of the drug.

12.—Mr. E. H. C. Walsh, Officiating Collector.—*Number of witness*—27.

Q. 52.—Their excessive use, no doubt, leads to crime by producing a violent form of intoxication and by rendering the person for the time being not fully aware of the effects of what he is doing.

13.—K. G. Gupta, I.C.S., Excise Commissioner, Bengal,—*Number of witness*—17.

Q. 1.—During my 20 years' service I have worked in various parts of the Lower Bengal and Orissa, and as Sub-Divisional Officer and afterwards as District Officer had to administer excise in my jurisdiction.

Q. 52.—Occasional excessive use of ganja may lead to sudden outbursts of passion. Habitual excessive consumers have often irritable tempers.

14.—Mr. W. R. Ricketts, Manager, Nilgiri State.—*Number of witness*—92.

Q. 1.—First Excise Officer, then Manager of the Excise Administration in the Native State of Nilgiri for the last nine and a half years.

Q. 52.—Excessive consumption of both ganja and bhang leads in all probability to crime, the consumers not being responsible for their actions owing to the intoxicating effects. Usually crimes of a daring nature and those attended by violence are committed by ganja consumers.

Q. 53.—Yes; the slightest provocation would incite acts of violence wholly unpremeditated. I know of no case in which excessive indulgence in these drugs has led to temporary homicidal frenzy, but, of course, insanity caused by excessive consumption of ganja produces the disease, invariably attended with great violence.

15.—Mr. Rowley Lascelles Ward, District Superintendent of Police.—*Number of witness*—89.

Q. 1.—I have served in the Police Department for 14 years.

Q. 53.—Excessive indulgence in ganja does incite to violent crime. I know of a case where a smoker suddenly murdered a vendor because he would not supply him with more ganja.

Q. 54.—I have heard of ganja being used to fortify the courage of criminals about to commit premeditated acts of violence.

16.—Babu Nobin Chunder Sen, Sub-Divisional Officer.—*Number of witness*—39.

Q. 51.—No violent crimes, such as severe hurts and murders, are induced by excessive ganja smoking.

Q. 53.—It does. I know of one case where a murder was committed under the influence of too much ganja smoking by a fakir.

17.—Beprodas Banerjee, Newspaper Editor, and Chairman, Baraset Municipality.—*Number of witness*—217.

Q. 1.—I have known lots of hemp and charas smokers, have seen Hindu and Mussalman mendicants. Religious ascetics use ganja and sidhi, and have also seen ganja and sidhi used in temples.

Q. 51.—Budmashes avoid opium, lest while in jail they may suffer. But as a rule they are ganja-smokers. Dacoits and burglars invariably smoke ganja immediately before commencing operations.

18.—Rai Kamalapati Ghosal, Bahadur, Pensioner, Sub-Registrar and Landholder.—*Number of witness*—99.

Q. 1.—I was a police officer, and served both in the old and new police for more than 30 years.

Q. 51.—Many of the bad characters are habitual moderate consumers of ganja.

Q. 54.—Dacoits and robbers generally use ganja to fortify themselves to commit crimes with acts of violence.

19.—Nitya Nanda Roy, Merchant and Zamindar.—*Number of witness*—240.

Q. 51.—There are many wily bad characters, that use the drug moderately in order to retain their memory sharp, sense keen, eye clear, and ear acute for perpetrating crime with cunning, and at the same time use the drug only to give excitement to the action and to add extra amount of zeal and determination.

20.—Raja Protap Narain Singh, Deo Bahadur, C.I.E., Chief of Jashpur.—*Number of witness*—151.*

Q. 51.—Habitual consumers of these drugs are bad characters.

21.—Jagat Kishore Acharjea Chowdhuri.—*Number of witness*—179.

Q. 1.—Being a zamindar in Mymensing district, and having occasion of touring almost all over it, I had direct intercourse with every class of people, and had opportunity of acquiring personal experience about their habit of life and matters connected with the hemp drugs, in regard to which my answers are framed.

Q. 51.—I can say that most of the bad characters are ganja-smokers, and it is ganja that makes them impetuous and bold to perpetrate the foul actions they commit.

Q. 52.—I believe they grow up more fierce and turbulent by the excessive use of ganja.

22.—Hira Lall Banerji, Deputy Collector.—*Number of witness*—54.

Q. 1.—Experience gained during the course of my official career and personal experience.

Q. 51.—Generally rioters and bad characters are supposed to be ganja-smokers. From the facts recorded on the subject, it will appear that dacoits generally smoke ganja before the commission of the crime, in order to fortify themselves for the act. Most probably such people were not excessive consumers, as they had to act with considerable deliberation and skill.

*NOTE.—Not reported.

23.—Anango Mahan Naha, Judge's Court Pleader.—*Number of witness*—220.

Q. 51.—Yes, almost all the bad characters in any locality are habitual consumers of these drugs. Ganja-smokers are generally thieves.

24.—Kailas Chundra Dutta, M.A., B L., Vakeel, Judge's Court, Tipperah.—*Number of witness*—221.

Q. 52.—Yes; a large proportion of bad characters in the village are addicted to ganja-smoking.

Q. 53.—Yes, excessive indulgence leads to outbursts of temper, which cannot be controlled, and which may lead to perpetration of violent crimes.

25.—Mr. H. M. Weatherall, Manager, Nawab's Estate.—*Number of witness*—197.

Q. 1.—Served Government for 30 years, 20 of which as District Superintendent of Police, and 16 as Manager of large estates.

Q. 51.—Speaking as an old Police officer, I have invariably found thieves and bad characters addicted to smoking ganja; it is said to give them courage to undertake a job and cunning to escape capture.

Q. 53.—I know it tends to lunacy. I have seen several instances among criminal offenders.

26.—Surgeon-Lieutenant-Colonel A. Crombie, M.D., Surgeon Superintendent, General Hospital, Calcutta.—*Number of witness*—104.

Q. 1.—Chiefly as Superintendent of the Dacca Lunatic Asylum for 7 years, and Member of Standing Committee for advising Government with regard to criminal lunatics.

Q. 51.—Much of the violent assaults and all the cases of "amok" that came under my notice in connection with insanity were committed by ganja-smokers. And most often as the result of a single excessive debauch, even in those accustomed to the moderate use of the drug.

Q. 53.—In these cases the crime was unpremeditated and the criminal subsequently appeared to be oblivious of the circumstances. I have known many cases of temporary homicidal frenzy produced in these ways.

27.—A. K. Ray, Sub-Divisional Magistrate, Bongong.—*Number of witness*—61.

Q. 1.—Have had knowledge of ganja-smokers from infancy.

Q. 53.—I know of 14 cases in which persons insane from excessive use of ganja committed unpremeditated violent attacks on women passing by.

28.—Babu Suresh Chundra Pall, Special Excise Deputy Collector, Howrah.—*Number of witness*—69.

Q. 1.—I have had opportunities of obtaining information on the subject as Collector.

Q. 51. A large proportion of bad characters use ganja. People who commit crimes harden themselves by the use of ganja.

Q. 54.—Yes, criminals who are addicted to ganja fortify themselves to commit a crime by taking ganja.

29.—Rai Bahadur Radha Ballav Chowdhuri, Honorary Magistrate, &c.—*Number of witness*—167

Q. 52.—Yes, a large proportion of bad characters are excessive consumers of ganja. The crime of theft generally is the special character of an excessive ganja-smoker.

30.—Bhuvan Mohan Sanyal, Government Pleader.—*Number of witness*—225.

Q. 51.—A good portion of bad characters are known as habitual moderate consumers of ganja.

I have often come across cases in my experience as a public prosecutor, in which the offenders were known to have used either ganja or alcohol before the commission of the offence.

Q. 53.—I believe an excessive indulgence in ganja incites to unpremeditated crime.

31.—C. R. Marindin, Magistrate and Collector.—*Number of witness*—16.

Q. 51.—A good many are said to be. It is a frequent piece of evidence in a bad livelihood case that the accused consumes ganja.

With crimes of violence.

Q. 53.—Yes; I have known cases where the consumption of the drug has led to temporary homicidal frenzy.

Q. 51.—The evidence is generally given. I think that the man is living beyond his means, and has to resort to theft to supplement his income.

32.—Abdus Samad, Deputy Magistrate and Deputy Collector.—*Number of witness*—55.

Q. 1.—I have been connected with excise administration since 1887.

Q. 51 & 52.—Nearly all clubmen, rioters, house-breakers, thieves, and dacoits, especially in Lower Bengal, are consumers of ganja in moderation or excess. They generally have a smoke of ganja before sallying forth on an expedition.

Petty thefts are often committed by poeple given to ganja-smoking, but having no means of satisfying the craving.

Q. 53.—Excessive indulgence in ganja is believed to incite to unpremeditated crime. I know of no case in which it has led to temporary homicidal frenzy.

33.—Mr. C. A. S. Bedford, Deputy Commissioner.—*Number of witness*—32.

Q. 51.—Petty thefts are committed by those who have been long addicted to the use of ganja, and whose intellectual faculties and moral sense are impaired. Violent crimes are also committed by those under the influence of the drug.

Q. 52.—In the acute stage riotings and murders occur.

34.—Mr. E. R. Henry, Inspector-General of Police, Bengal.—*Number of witness*—85.

Q. 1.—Experience of 21 years. Author of a Criminal Biography.

Q. 53.—As regards this question opinion is also divided. Some District Superintendents are inclined to believe that the excessive use of hemp drugs does lead to the commission of unpremeditated crime, while, on the other hand, several officers hold the contrary opinion. There seems, however, little doubt but that the excessive use of ganja makes a man irritable, and there are cases on record in which murders and murderous assaults have been committed under its influence.

In his oral statement the witness says that out of 1,408 bad characters 199 are addicted to the use of ganja and 16 are said to take bhang, and none are shown to take charas. It is evident from this that 14·1 per cent. are ganja-smokers among bad characters.

35.—Mr. W. H. Grimley, Commissioner of Chota Nagpore.—*Number of witness*—3.

Excessive use of ganja is believed to lead to crime. It brings a man into disrepute, and when once a man is known as a reprobate, the transition to crime is speedy. Excessive indulgence in ganja is said to incite to unpremeditated crime and to lead to temporary homicidal frenzy.

36.—Navin Krishna Banerjee, Deputy Magistrate and Deputy Collector.—*Number of witness*—42.

Q. 51.—Ganja-smoking hardens the sensibilities of the smoker.

Assam (Crime).

37.—Mr. R. S. Greenshields, Deputy Commissioner.—*Number of witness*—6.

Q. 51.—In this neighbourhood the Assamese proper are as a rule non-consumers of ganja. The ganja consumers are generally foreigners, and as a rule belong to the very lowest grades amongst such foreigners, and, as might be expected from their social position, they do furnish a considerable proportion of the bad characters of the neighbourhood.

52. I have known crimes of violence to be committed on little or no provocation by persons labouring under the peculiar delirium produced by a long continued course of ganja. In fact, people in this condition are in my opinion particularly dangerous, being extremely easily provoked to commit crimes of violence.

53. Yes, most undoubtedly. Persons labouring under peculiar delirium produced by the excessive use of ganja are particularly liable to commit manslaughter on little or no provocation. I have known more than one such case.

38.—Dr. J. W. Macnamara, M.D., Civil Surgeon.—*Number of witness*—20.

Q. 1.—I have for 13 years been among people who make use of hemp products to greater or less degree.

Q. 51.—A very large proportion of the prisoners in our jail at Tezpur have been addicted to the use of these drugs in some shape. Of 239 male prisoners, 15 consumed ganja. Crime, it would appear, goes with the use of these drugs. I can't ascertain whether ganja consumers are addicted to any special crime.

Q. 53.—Yes. It leads to homicidal mania. A case occurred in the Tezpur Lunatic Asylum in which one of the lunatics who was believed to have become insane from smoking ganja killed the compounder in a fit of excitement. He smoked 5 annas' worth daily.

39.—Mr. J D. Anderson, Officiating Commissioner of Excise.—*Number of witness*—4.

Q. 1.—I have been in charge of the excise administration of nearly every district in Assam, and am at present officiating as Commissioner of Excise.

Q. 51.—The only habitual criminals in the province are the Mussalman river dacoits of Sylhet, and foreigners of bad character in other districts. All, or nearly all, of these consume ganja habitually and to excess.

Q. 53.—I have known of cases in which the immoderate use of ganja among tea garden coolies has brought about insane and unreasonable jealousy resulting in crimes of violence.

40.—Mr. J. H. W. Dalrymple-Clark, District Superintendent of Police.—*Number of witness*—14.

Q. 1.—Twenty years' service in India.

Q. 52.—Ganja is the drug almost invariably used by real bad characters, and is generally used by such in excess when about to commit heinous crime and crime with violence. Bad characters habitually use it to excess in order to give themselves Dutch courage. The excessive use of ganja more often than not leads to crime amongst the lower classes.

41.—Laksmi Kanta Barkagati, Secretary to the Tezpur Ryots' Association.—*Number of witness*—46.

Q. 1.—I had ample opportunities of visiting different places of this district and frequently in contact with persons addicted to use narcotics.

Q. 53.—Excessive indulgence in ganja-smoking incites unpremeditated crime, such as assaults and murder.

Ganja gives rise to murder and assaults. The ganja-taker becomes suddenly excited and does these things. I have seen assaults two or three times in this town by people whom I know to be ganja-smokers. When I was Steamer Agent at Birnath, the Doms, my neighbours, used to quarrel under the influence of ganja, and we had to drive them off. The facts that such assaults and other offences arise from ganja does not come out in trials, because the people do not plead that they have taken the drug. They prefer to say that they never committed the offences at all.

42.—Mr. J. Rivett-Carnac, District Superintendent of Police.—*Number of witness*—15.

Q. 53.—I have a distinct impression that excessive indulgence in ganja does incite to unpremeditated violent crime. I cannot call to mind at present any particular instance of this, but I am pretty certain that I have met with several cases in the course of my 16 odd years' experience as a Police officer.

43.—Mr. F. C. Moran, Tea Planter.—*Number of witness*—33.

Q. 53.—Yes; murder. I had a case of a man in my garden who cut off his wife's head whilst temporarily insane under the effects of the drug.

44.—Mr. P. H. O'Brien, Deputy Commissioner.—*Number of witness*—7.

Q. 53.—I recollect a case of a murderous assault being committed by a person under the influence of ganja, but I cannot give particulars. I presume that excessive indulgence in these drugs does incite to unpremeditated crime, inasmuch as they appear to produce mania under such conditions.

45.—Kishen Chandra Chattopadhya.—*Number of witness*—40.

Q. 1.—Have had to deal with many consumers and dealers of the drugs and personally have seen the consumption.

Q. 53.—I know of a case in which an excessive ganja-smoker killed a friend of his with a *lathi* without any apparent cause for such action.

North-Western Provinces (Crime).

46.—Munshi Raj Kishore, Pleader.—*Number of witness*—234.

Q. 51.—Yes, thieves are habitual consumers, and the use of these drugs is often the motive of thefts.

Q. 52.—Necessity has no law. The more want for money for these drugs, the more thefts to defray its expenses.

47.—E. Berrill, Deputy Inspector-General of Police.—*Number of witness*—65.

Q. 51 and 53.—A fairly large proportion of the lower class of Hindu bad characters are moderate consumers of the drugs, but such consumption has no connection with crime. Excessive indulgence in ganja has been known to incite to unpremeditated violent crime. Unfortunately I am not able to recall any particular case.

48.—Mr. E. R. Parsons, District Superintendent of Police.—*Number of witness*—70.

Q 51 and 52.—The percentage (of bad characters) is not more than 15. The excessive use of either ganja or charas affects the mind, and instances have been known of men so affected committing crime.

49.—Mr. A. W. Cruickshank, Magistrate.—*Number of witness*—5.

Q. 52.—Ganja used in excess is particularly likely to produce utterly reasonless violence and even homicidal mania.

50.—M. Mahomed Wasi, Deputy Collector.—*Number of witness*—44.

Q. 51.—There are a large proportion of bad characters habitual moderate consumers of ganja and charas, with the exception of Sadhus, Bairagis, and persons belonging to the labouring classes.

The moderate use has connection with crime in general and often with crime of any special character. It has been noticed that these bad characters administer drugs to travellers with the pretext of its being tobacco, and when the travellers become senseless, the bad characters make away with their property.

Q. 52.—The more is the excessive use of the drugs, the more is the number of crime

Q. 53.—Premeditation is necessary for the committal of heinous offences.

Intoxication will nevertheless incite to the committal of crime.

51.—Mr. H. Fraser, Magistrate, Bijnour.—*Number of witness*—8.

Q. 53.—I believe it does. In my experience as a Magistrate I have had many cases before me in which acts, chiefly of violence, but also acts such as thefts and burglaries, were committed under the influence of ganja. I cannot give figures, but I may have had 20 or 30 such cases come before me in the eastern districts of Gorakhpur and Benares. I cannot remember any particular case of temporary homicidal frenzy, but I believe that excessive use of ganja does sometimes lead to homicidal frenzy.

Q. 36. Oral.—I have never seen a native of the middle class ruined by liquor. On the other hand, I have seen some criminal lunatics whose condition was attributed to ganja, charas, and bhang. Men have actually appeared before me who seemed to be still under the influence of the drug.

Q. 53. Oral.—I noticed that when a man stated he had done an act under the influence of ganja, he was frequently corroborated by the witnesses. On the other hand, when alcohol was alleged by the prisoner, the evidence did not support him.

52.—Mr. C. F. Knyvett, District Superintendent of Police.—*Number of witness*—68.

Q. 53.—Excessive indulgence in either of these three drugs sometimes leads to quarrel and assaults.

53.—Mr. B. Hamilton, District Superintendent of Police.—*Number of witness*—73.

Q. 51.—In the city badmashes generally make use of these drugs.

54.—Syed Habibullah, Joint Magistrate.—*Number of witness*—25.

Q. 54.—Ganja and charas are invariably used by dacoits before they commit dacoities. These drugs make them more active and enable them to walk long distances.

55.—Khan Bahadur Syed Ali Husen, Revenue Member, Rampur Council of Regency. —*Number of witness*—35.

Q. 52.—The excessive use of these drugs is the habit of the depraved and immoral. It promotes crime.

56.—Mr. L. H. L. Thomas, District Superintendent of Police.—*Number of witness*—69.

Q. 53.—It is believed as a matter of course excessive indulgence does incite to unpremeditated crime of all kinds. It promotes poverty and despair and all the result of a debased life which naturally must lead to criminal end.

57.—Dr. Manohar Pershad Tewari, Practitioner in Medicine and Surgery.—*Number of witness*—130.

Q. 51.—Most of the bad characters are habitual moderate consumers of any of these drugs. Charas and ganja are expensive things to be used for the poor people; and when they cannot afford to bear these heavy expenses, they become inclined to gamble, and when they fail in this they commit robbery and theft, etc.

Q. 53.—Yes, excessive indulgence in any of them causes unpremeditated crime, violent or otherwise. I know many in which it has led to temporary homicidal frenzy.

Yes, criminals generally who are addicted to any of these drugs fortify themselves by using it before committing a premeditated act of violence or other crime, but not otherwise.

58.—Mr. H. O. W. Robarts, Joint Magistrate and Excise Officer.—*Number of witness*—32.

Q. 53.—I have met with one case in which a police constable, under the influence of bhang, threw small stones at his comrades who were drilling and sat at the door of his quarters with his rifle, threatening to shoot any one who tried to take it from him. The rifle was, however, got away from him without difficulty or accident.

59.—Mr. W. R. Partridge, I.C.S., Deputy Commissioner.—*Number of witness*—20.

Q. 1.—I have been ten years in the Civil Service in the North-Western Provinces and Oudh, and have held charge of the Excise Department in three districts—Gorakhpur, Benares, and Garhwal.

Q. 52.—To the excessive use of ganja and charas many crimes of violence are probably ascribable.

Q. 53.—Yes, in Srinagar (Garhwal) some 8 or 10 years ago a fakir who consumed charas in considerable quantities took a boy and deliberately chopped off his head. When kept out of the way of any hemp drugs this man seems to behave fairly like a rational being; but whenever he gets charas, he gets violent and dangerous.

60.—Kedar Singh, Pensioned Subadar, Regiment No. 36.—*Number of witness*—262.

Q. 51.—Large proportion of bad characters are habitual moderate consumers of these drugs, and they commit both general and special crimes.

Q. 53.—The excessive use of these drugs sometimes incites to crime.

Q. 54.—The criminals use these drugs to fortify themselves to commit a premeditated act of violence and other crime.

61.—M. Zain-ul-Abdin, Khan Bahadur, Deputy Collector.—*Number of witness*—39.

The witness has had varied experience of many years.

Q. 51.—Though there is no large proportion of bad characters among habitual moderate consumers, but still they are mischievous, and the common crimes are committed because they are always in need of money to buy drugs for consumption.

62.—Ali Mahomed Khan, Pensioner.—*Number of witness*—264.

Q. 1.—I was in company with those smoking charas, etc.

Q 51.—Bad characters use bhang, charas, and ganja generally, and their resources are generally limited. They invent many ways to procure money by illegal means when their income fails them. In this way crimes are increased.

Q. 53.—By excessive use a man loses his sense of right and wrong. In a state of intoxication they plan out and commit different crimes which they hate when sober. They do not remember anything done by them. It is often heard that murders have been committed in such a state. Hurt and grievous hurt are small matters for these people.

Q. 54.—Thieves and other bad characters use them. They plan out some device, and by this intoxication they fix their attention to it exclusively.

63.—Kasim Hasan Khan, Tahsildar.—*Number of witness*—58.

Q. 51.—Generally rogues and vagrants use them in assemblies. Such bad characters often plan criminal designs in such a condition.

Q. 54.—Criminals use them to acquire temporary courage to commit a premeditated act of violence or other crime.

64.—Mr. E. Rodgers, Assistant Commissioner.—*Number of witness*—24.

Q. 1.—I have been Excise Officer in Hamirpur, Meerut district, and for a short time in this district.

Q. 52.—Intoxication from these drugs, and more especially from ganja, raises a man to a high pitch of excitement; at times leads him to commit violent crimes that he would shrink from committing in his saner moments.

Q. 53.—Unpremeditated crimes are often committed by men while under the influence of these drugs; but such crimes are generally of the nature of revenge for some slight or injury.

65.—Mr. T. Stoker, I.C.S., Excise Commissioner.—*Number of witness*—6.

Q. 1.—I was twelve years an Assistant Magistrate and Joint Magistrate and Collector, and constantly in charge of the district excise. I was three and a half years in settlement work. I have been two years in charge of the Excise Department.

In regard to crime, my belief and experience as a Magistrate and Excise Officer is that the use of hemp drugs is not a direct cause of crime. In cases where persons are going to commit a crime of violence already arranged and determined, I believe they undoubtedly use hemp drugs, as they might any other stimulant, to fortify themselves. I have known such cases. I remember catching dacoits red-handed who were said to have used hemp drugs. They were all in their senses. I think, too, that, as in the case of alcohol in England, a man might go much further in crime under the influence of drugs than he would have done had he not been excited by their use. But such effects of the drug have never come before me.

66.—Hon'ble A. Cadell.—*Number of witness*—1.

Q. 1.—I am Member of the Board of Revenue in charge of Excise and Member of the Provincial Council.

The consumption of charas and ganja is looked upon as a more or less disreputable practice. It is natural then that the proportion of bad characters who use these drugs should be large. That is the only connection I see between them and crime.

67.—Mr. F. Porter, Inspector-General of Police.—*Number of witness*—64.

Q. 1.—I have twenty-eight years' service in the Civil Service in this Province and a little over two years as Inspector-General.

Q. 51.—The only connection between these drugs and crime that I know of is that when a man has made up his mind to a crime and has not the pluck to do it, he takes the drug to give him Dutch courage.

Q. 54.—I think very few men in the Police force use these drugs. We do not in the first place put in men who are habitual users. My opinion is that the habitual use unfits a man for being a policeman.

Punjab (Crime).

68.—Behram Khan, Zemindar and Honorary Magistrate.—*Number of witness*—61.

Q. 53.—The use of charas or bhang makes the consumer frantic and leads him to commit a violent and unpremeditated crime. Here is an instance. Two years ago a person of the Khosa tribe, while under the influence of bhang, murdered one of his tribesmen in the Khosa ilaka in this district.

69.—Mr. Alexander Anderson, Deputy Commissioner.—*Number of witness*—10.

Q. 1.—I have served in the Punjab since November 1872 as Assistant Commissioner, Settlement Officer, and Deputy Commissioner.

Q. 52.—The excessive use of charas is said to lead to crimes of violence. The belief is general and, I believe, well founded.

Q. 53.—Crimes of violence and the excessive use of charas are associated together. The records of the lunatic asylums will give numerous cases where charas smokers have run amok.

70.—Sheikh Riaz Hussain, Zemindar.—*Number of witness*—67.

Q. 51.—Some bad characters commit crimes by means of these drugs, generally offences under sections 377 and 379 of the Indian Penal Code, and in some instances the criminals stupefy their victims by administering these drugs in furtherance of their criminal designs.

Q. 52.—Crimes are committed by inducing the excessive use of these drugs, and by means of these serious and minor offences are committed.

Q. 53.—Certainly indulgence in charas incites to unpremeditated crime, violent or otherwise, but I can give no instance.

Sardar Balwant Singh, Extra Assistant Commissioner, Jagirdar, Government servant. —*Number of witness*—38.

Q. 51. A large proportion of bad characters are habitual moderate consumers of charas.

71.—Arjan Singh, Extra Assistant Commissioner.—*Number of witness*—19.

Q. 1.—I was Excise Officer at Umballa, Rohtak, and Dera Ghazi Khan for several years. At present I am engaged in the Dera Ghazi Khan Settlement as Extra Assistant Settlement Officer.

Q. 51.—I have had charas-smokers before me as Magistrate. They were vicious persons of bad character, from whom I had to take security. They took both charas and chandu.

72.—Major-General M. Millet, Retired List.—*Number of witness*—69.

Q. 51.—Yes, most professional bad characters use these drugs.

Q. 52.—Yes. As No. 51.

Rape, unnatural crime.

Deeds of violence.

Q. 53.—The ganja-smoker lives in the border land of homicidal mania. Numerous cases. See also criminal records. See also "Revelations of an Orderly" written by a country-born Magistrate of great experience (Benares, Medical Hall Press, republished 1866). This book was described by an inexperienced European Magistrate some thirty years ago as a gross exaggeration, but it is below, not above, reality.

73.—Mulraj, Extra Judicial Assistant Commissioner.—*Number of witness*—15.

Q. 51.—Bad characters generally use these drugs.

73-B.—Pundit Janardhan Baid, Hakim.—*Number of witness*—94.

Q. 1.—I have been practising as a baid for the last 34 years, and during this period I have had several opportunities of acquainting myself with the effects of these drugs.

Q. 51.—Charas is commonly smoked by bad characters.

Q. 52.—Excessive use of charas and ganja is very bad and injurious.

74.—Surgeon-Major T. E. L. Bate, Inspector-General of Prisons.—*Number of witness* —32.

Q. 51.—A large proportion of the prisoners in our jails are consumers of intoxicating drugs of one kind or another.

The use of these drugs begets lazy habits, which may sooner or later lead to crime.

75.—Mr. R. Sale Bruere, District Superintendent of Police.—*Number of witness*—31.

Q. 1.—I have been now in Government service for the last thirty-two years.

Q. 51.—Moderate consumers, when they are in poor circumstances, are inclined to commit petty crimes in cities and towns to obtain money to purchase these drugs. They are also quarrelsome, and their bad tempers, when under the influence of drugs, get them into trouble.

Q. 53.—Persons, when addicted to the excessive indulgence of these drugs become temporarily insane, and when in this state commit offences of a grave nature, as they are extremely irritable and easily take offence at everything, and have been known to commit murder, suicide, &c., when in this intoxicated state.

76.—Bedi Sujan Singh, Rais and Honorary Magistrate.—*Number of witness*—57.

Q. 53.—Ganja and charas consumers are often quarrelsome.

77.—Colonel Hutchinson.—*Number of witness*—4.

I have been thirty-one years in India and twenty-six years in the Punjab Commission, chiefly in Jhelum, Multan, Gurdaspur, Lahore, and Simla. I am now Commissioner of Lahore.

In regard to the connection of the drugs with crime, I have known cases of men running "amok" who, I was informed at the time, were under the influence of the drug.

None of them came before me officially, but I have heard of such cases. And I remember one case in which a Gurkha belonging to the regiment to which I was then attached ran "amok" and killed or cut down some four or five people in the bazar.

78.—Mr. J. P. Warburton.—*Number of witness*—30.

I have known of some cases where a man having taken charas or bhang to excess went off and committed motiveless crime, such as running amok. I know that there have been such cases as murders or violent crimes being committed without motive under the influence of these drugs. But the cases are so few and far between that it would be difficult to find them.

Central Provinces (Crime).

79.—Colonel H. Hughes Hallett, Officiating Inspector-General of Police and Prisons.—*Number of witness*—29.

Q. 1.—General observation during a residence of 35 years.

Q. 51.—Yes. Nearly all bad characters are consumers to a greater or less degree. The dissolute habits engendered by its use lead to crime against property.

Q. 53.—Yes, I think so. Running *amok* is, I should say, always the result of excessive indulgence.

Q. 51.—Oral.—In jails a large number of casuals might not be found to be consumers; but I think that if you got at the truth you would find 50 per cent. of the habituals to be consumers. I should say that over a whole jail, like the Jubbulpore Jail, the average would be over 25 per cent. I think that all habituals, as now defined, are not bad characters properly so called. Therefore I conclude that more than 50 per cent. of bad characters are consumers. The excessive consumer is a dissolute person, who will not work. Therefore he has a tendency to commit offences against property when he runs out of cash. This does not refer to the moderate use. I cannot refer to cases, but I fancy every Magistrate has had such cases.

80.—Pundit Dina Nath, Rai Bahadur, Assistant District Superintendent of Police.—*Number of witness*—32.

Q. 51.—A large proportion of bad characters, habitual, are moderate consumers of ganja; such persons commit petty thefts and simple hurt cases.

The rule holds equally in the case of opium-smoking and liquor-imbibing. I was under the impression that I must confine my reply to ganja-smoking alone. The connection, in my opinion, between ganja and crime is that of cause and effect.

Habitual bad characters are generally idle men who do no work or can get no work; and as they have contracted the habit of smoking ganja and opium and drinking liquor, they do not feel up to work, but as they must more or less have these drugs, they are necessitated to commit petty thefts.

Q. 52.—The use of the intoxicating drugs obtained from hemp to excess tends to make the consumers more violent, and violent crimes are often committed by such men.

Q. 54.—Yes, criminals make use of such drugs and to give them false courage when they wish to commit violent crime.

81.—Mr. Fred. A. Naylor, District Superintendent of Police.—*Number of witness*—30.

Q. 51.—In towns especially, I think, a large proportion of the bad characters are moderate consumers of hemp drugs. In the district the proportion of moderate consumers is smaller than in towns. These drugs are generally made use of by gamblers. Whether the drugs lead to the gambling or the gambling to the drugs I am not prepared to say, but that there is a connection between drugs and the criminals through the channel of gambling there is no doubt. When the gambler is short of funds he takes to stealing.

Q. 52.—The excessive use of these drugs leads to the commission of crime of a more serious nature.

Q. 53.—An excessive use of hemp products, specially ganja, often leads to unpremeditated violent crime. It also causes the death of the consumers who, when the system is

saturated to a certain extent, sometimes drop dead after taking a long pull. I know of several instances in which it has led to temporary homicidal frenzy. Such is not the case with the excessive use of opium.

Q. 54.—Yes, often. It is notorious that Gazees bhang themselves when they wish to fight or to run *amok*.

82.—The Hon'ble Gangadharrao Madhav Chitnavis, Honorary Magistrate, Member of the Viceroy's Council.—*Number of witness*—46.

Q. 51-52.—I have not been able to trace the connection of crime solely to the consumption of this drug. But as bad characters generally belong to the lower classes, and as these classes of persons are very generally addicted to this vice, it generally appears that most of the bad characters are given to smoking ganja. As an Honorary Magistrate I find that the criminals who come before me are generally given to this sort of vice.

Of course the persons using this drug in excessive quantities are persons who are given to thefts and other offences.

Q. 51.—Oral.—By criminals I mean thieves and such persons, not those charged with assault. I should expect 60 per cent. of thieves, robbers, etc., in jail to be ganja-smokers; one-fourth of the whole jail population probably.

83.—Trimbak Rao Sathe, Commissioner and Diwan of the Sonepur State.—*Number of witness*—13.

Q. 53.—The excessive indulgence in ganja-smoking incites to unpremeditated violent crime. Recently I saw a case of a man who went mad owing to excessive ganja-smoking, and in that state of his mind he killed his own uncle who had remained to watch him. There was no ill-feeling between them. There was no motive for the murder except, perhaps, that the uncle did not allow him the use of ganja.

Q. 53.—Oral.—By homicidal frenzy I understand a desire to kill a man, no matter who it might be.

84.—Syed Mohamed Husan, Extra Assistant Commissioner and Diwan, Khairagarh State.—*Number of witness*—15.

Q. 51.—The bad characters generally use these drugs in order to prepare themselves for some deed of violence, such as house-breaking, robbery, and dacoity.

Q. 52.—An excessive consumer is too much intoxicated to do any act of violence. The indulgence in these drugs weakens constitution and thus renders the consumer quite unfit for any deed of violence. I have come across cases in which the Police have made a criminal confess his crime by making him smoke ganja excessively.

Q. 53.—Yes, the excessive indulgence in these drugs, especially in ganja, incites to unpremeditated violent crimes, such as homicide, grievous hurt, and suicide.

85.—Mr. Pasley, Inspector of Police and Superintendent of City Police, Jubbulpore.—*Number of witness*—34.

Q. 51.—I do not think that more than 20 per cent. of the bad characters of this city are moderate smokers of these drugs. These ganja-smokers commit petty thefts only.

Q. 52.—About 10 per cent. of the bad characters of this city are excessive ganja-smokers; they are not addicted to any special class of crime, but commit petty thefts like the others when driven to it for want of funds to obtain the drug.

Q. 53.—The excessive use of this drug incites bad characters to quarrel with people and ultimately to fight. Byragees and sadhus are much addicted to the use of these drugs, and I have known an instance in which one sadhu, when excited under the excessive indulgence of ganja, killed a fellow-sadhu.

Madras (Crime).

86.—Colonel G. Chrystie, Deputy Inspector-General of Police.—*Number of witness*—65.

Q. 51.—The lowest class of Muhammadans, among whom there are a good many bad characters, consume ganja and bhang prepared from it. Korchera or Yerikallas and Lambadies or Sugallies are said also to consume it largely. These tribes often commit crime.

87.—Captain C. M. Kennedy, Commandant, 1st Pioneers.—*Number of witness*—81.

Q. 51.—Those who consume them are generally, from a military point of view, worthless characters.

Q. 53.—Yes; particularly ganja.

In nearly every case of murder, by shooting, etc., which has occurred of recent years, the perpetrator has been a known ganja or charas eater.

88.—Mr. E. H. Gadsden, Superintendent, Central Jail.—*Number of witness—73.*

Q. 51.—Fifty per cent. of re-convicted prisoners now in jail use ganja when at liberty.

89.—H. E. G. Mills, Superintendent, Central Jail.—*Number of witness*—74.

Q. 51.—All fakirs and wanderers from place to place and those who are habitual gamblers with no permanent mode of living resort to ganja-smoking; for want of the drug, whether moderate or excessive, leads to crime.

90.—Mr. I. Tyrrell, Superintendent, Central Jail.—*Number of witness*—71.

I have been employed as a jail official for more than 26 years, and can remember at different times during that period assaults made on jail officials, jail servants, and fellow-convicts by prisoners who were at the time when committing the assaults under the influence of ganja.

I should certainly say, from the number of men I have seen under its influence, that the drug stimulates the passions of some men and makes others utterly reckless, caring but little, when under its influence, what crimes they commit.

91.—K. Narainaswamy, R. B., Inspector of Police.—*Number of witness*—69.

Q. 1.—I have been 17 years in the Police Department and three years in other departments.

Q. 51.—Yes, out of 21 on the active list of criminals in the Vizianagram town, 15 are habitual ganja-smokers and opium-eaters or smokers. These men commit thefts and house-breakings, though not of a serious nature.

Q. 53.—I have known of cases in which the excessive use of ganja-smoking has made the consumers mad; but I know no case in which it led to homicidal frenzy. (Q. 53.) By mad I mean only leaving worldly concerns and leaving home and going about.

92.—Sri Vasudeva Rajamani Rajah Deo, Zamindar of Mandasa.—*Number of witness*—128.

Q. 1.—I am answering the questions from my local experience and the knowledge in medical books.

Q. 51.—It seems that ganja increases the bad characters of the habitual consumers, who practise it or use it once a day, and hence show their violence.

Q. 53.—Ganja, when taken excessively, excites a consumer to commit any kind of violence. About 23 years ago there was a consumer named Padmanapha Marvary, who actually tried to stab one Dasarathi Charu Patnaik with the cruel intention of murdering him.

93.—Mr. K. C. Manavedan Raja, Collector.—*Number of witness*—19.

Q. 53.—May; it is not unlikely that the indulgence may occasionally induce violent and other crimes.

An instance is quoted locally wherein a person who indulged in the drug beat a person, resulting in death, on slight provocation.

Bombay (Crime).

94.—Narain Rao-Bhikhaji Jogalekar, pensioned Deputy Collector of Government and now Karbhari of the Aundh State.—*Number of witness*—36.

Q. 1.—Experience of nearly 20 years.

Q. 53.—The accused in many cases charged for culpable homicide not amounting to murder, or causing the death of other persons by rash or negligent acts, have many times pleaded before me that they did the act while in a state of ganja or liquor intoxication.

95.—H. Kennedy, District Superintendent of Police.—*Number of witness*—54.

Q. 51.—It is generally found that bad characters are either habitual or moderate consumers of bhang and ganja. Taken as bad characters are from the lower orders, who are the most likely to indulge in these drugs, this is only natural. The moderate use of the drugs leads to abusive and quarrelsome conduct.

Q. 52.—A moderate but habitual consumer would, if he were to indulge to excess, probably rave and become excited and would be ready to commit any crime of violence that first came into his head.

Q. 53.—I do know of a case in which a sepoy of a Baluch regiment, when under the influence of ganja or bhang—I forget which it was—ran amok and shot at any one he came across, killing and wounding various persons.

96.—Mr. P. H. Dastur, Presidency Magistrate.—*Number of witness*—20.

Q. 52.—But the excessive use of ganja and charas may lead to crime, for those addicted to these drugs remain constantly under a stupour and are unable to follow any honest calling and must necessarily resort to crime.

Q. 53.—I am informed that excessive indulgence in charas makes a man violent in his temper and leads him to commit offences attended with violence. The Pathans in Bombay are well known as a turbulent class and they are mostly habitual consumers of charas. I had lately a case before me in which a Marwari goldsmith, under the influence of charas, attacked a bailiff with a pair of tongs and behaved very excitedly in court. I am not aware of any case in which the habit has led to temporary homicidal frenzy.

97.—Mr. Nanabhoy Cowasji, City Police Inspector.—*Number of witness*—60.

Q. 1.—I had opportunities for several years of coming into contact with such persons when I was in Kathiawar. Some of them consumed ganja and bhang in excessive, and some in moderate quantities.

Q. 52.—However, in one case to my knowledge it so occurred that in November 1885 in Broach certain Talavias, having gathered together one morning and after ganja, committed a riot in that town, in which the Superintendent of Police, Mr. Prescott, was killed. Further particulars, if required, may be obtained from Broach.

98.—Mr. C. G. Dodgson, I.C.S., 1st class Magistrate and Assistant Collector.—*Number of witness*—17.

Q. 51.—Bad characters in so far that they are often persons with no fixed homes or no regular means of employment—are frequently habitual moderate consumers of ganja. In my experience the use of the drug has no other connection with crime.

Q. 53.—Excessive indulgence in any of these drugs or other preparations is apt to lead to unpremeditated crime.

99.—Mr. J. M. Campbell, C.I.E.—*Number of witness*—9.

I have 24 years' service in all divisions of the presidency (except Sind).

I believe that in ordinary magisterial work there is no connection between hemp drugs and crime. But there are certain crimes, murders, and crimes of violence, ascribed to ganja; and there are also certain statements regarding the use of the drugs by Rajputs that point to its leading to violence. I have never sifted these statements, nor have such facts come to my notice. On the other hand, I have been told that the drugs make a man timid.

Sind (Crime).

100.—Dr. S. M. Kaka, M.R.C.S., L.R.C.P., D.P.H., &c.—*Number of witness*—24.

Q. 1.—As a medical practitioner of 11 years' standing and as medical officer of health I have had some opportunities of becoming acquainted with hemp drugs and their effects, especially in Karachi.

Q. 51.—The habitual moderate consumers, chiefly of charas, are bad characters—loafers, vagabonds, thieves, shop-lifters, &c.

101.—Mr. C. E. S. Stafford Steele, Officiating Deputy Commissioner—*Number of witness*—3.

Q. 52.—Persons claiming to be addicted to ganja and charas have been known to plead irresponsibility for their actions.

Q. 53.—It appears that those who indulge in bhang are easily provoked and become excessively irritable, and that insanity results from the immoderate use of ganja and charas. Serious crimes are most undoubtedly committed by persons addicted to these drugs, mostly ascribed either to provocation or frenzy.

102.—Khan Bahadur Kadirdad Khan Gul Khan, C.I.E., Deputy Collector.—*Number of witness*—4.

Q. 1.—I have served in all the districts of the province for a little more than 34 years, and have had to deal with those who sell and consume hemp.

Q. 53.—The excessive indulgence in these drugs does incite to unpremeditated crime of violence.

STATEMENT V.—*List of witnesses who say there will be no political danger.*
(Para. 86 of the note.)

Serial No.	Province.	Name and Rank.	Number of witness.
1	Bengal ...	Ganendra Nath Pal, Sub-Divisional Officer	46
2	Do. ...	H. P. Wylly, Government Agent	91
3	Do. ...	W. C. Taylor, Special Deputy Collector, Land Acquisition, East Coast Railway, and pensioned Deputy Magistrate and Deputy Collector	36
4	Do. ...	H. G. Cooke, Officiating Commissioner	8
5	Do. ...	C. Fasson, District Superintendent of Police	87
6	Do. ...	F. H. Tucker, District Superintendent of Police	88
7	Do. ...	A. C. Tute, Collector	12
8	Do. ...	J. C. Price, Magistrate and Collector	9
9	Do. ...	Mahendra Chandra Mitra, Pleader and Municipal Chairman...	209
10	Do. ...	A. E. Harward, Officiating Magistrate and Collector ...	30
11	Do. ...	Jadub Chandra Chuckerbutty, Civil and Sessions Judge ...	94
12	Do. ...	Gopal Chunder Mukerji, Sub-Divisional Officer	41
13	Do. ...	J. Kennedy, District Magistrate	20
14	Do. ...	J. H. Bernard, Officiating Collector	29
15	Do. ...	Nanda Krishna Bose, Statutory Civil Service, Acting Magistrate and Collector	25
16	Do. ...	R. L. Ward, District Superintendent of Police	89
17	Do. ...	Nobin Chunder Sen, Sub-Divisional Officer	39
18	Do. ...	Hon'ble F. R. S. Collier, Collector	15
19	Do. ...	F. H. Barrow, Collector	10
20	Do. ...	L. P. Shirres, Collector	26
21	Do. ...	Mathura Mohan Sirkar, Inspector of Police	90
22	Do. ...	Colonel Garbet, Deputy Commissioner	31
23	Do. ...	W. H. Grimley, Commissioner	3
24	Do. ...	Raja Peary Mohan Mookarji, Zamindar	160
25	Do. ...	Rai Radha Govind Rai, Sahib Bahadur, Zamindar... ...	166
26	Do. ...	Babu Rajkumar Sarvadhikari, Secretary	231
27	Do. ...	Umagati Ray, Pleader and Secretary to the Jalpaiguri Branch, Indian Association	232
28	Do. ...	Pyari Shankar Das Gupta, Medical Practitioner, Secretary, Bogra Medical Society	134
29	Do. ...	Akshay Kumar Maitra, Pleader, Secretary, Rajshahi Association	233
30	Do. ...	A. F. M. Abdur Rahman, Honorary Secretary, Mahomedan Literary Society	234
31	Do. ...	Kamala Kanta Sen, Zemindar, President of the Chittagong Association	235
32	Do. ...	Sub-Committee of the District Board, 24-Pargannas ...	247
33	Do. ...	District Board, Patna	248
34	Do. ...	District Board Sub-Committee	249
35	Do. ...	Rai Bahadur Radha Ballav Chowdhuri, Honorary Magistrate	167
36	Do. ...	Arrah District Board	251
37	Do. ...	A. W. B. Power, Commissioner of the Burdwan Division ...	5
38	Assam ...	Surgeon-Major J. W. Macnamara, Civil Surgeon	20
39	Do. ...	C. W. E. Pittar, Officiating Deputy Commissioner ...	12
40	Do. ...	J. L. Herald, Deputy Commissioner	8
41	Do. ...	Ishan Chandra Patranavis, Extra Assistant Commissioner ...	13
42	Do. ...	G. Godfrey, Commissioner	1
43	Do. ...	G. A Gait, Director of Land Records and Agriculture ...	9
44	Do. ...	J. J. S. Driberg, Commissioner of Excise	2
45	Do. ...	Lakshmikanta Barkagati, Secretary to the Tezpur Ryots Association	46
46	Do. ...	Radhanath Changakoti, Municipal Commissioner and Member, Local Board	47
47	N.-W. P.	Lieutenant-Colonel F. Barrow, Deputy Commissioner ...	19
48	Do. ...	Syed Habibullah, Joint Magistrate	25
49	Do. ...	Khan Bahadur Syed Ali Husen, Revenue Member, Council of Regency	35
50	Do. ...	H. C. Ferard, Collector and Magistrate	15
51	Do. ...	P. Allen, Officiating Collector	16

Indian Hemp Drugs Commission.

Vol. II.

APPENDICES.

ENQUIRY AS TO THE CONNECTION BETWEEN HEMP DRUGS AND INSANITY.

N. N. 32

SIMLA:
PRINTED AT THE GOVERNMENT CENTRAL PRINTING OFFICE.

1894.

SIMLA:

PRINTED AT THE GOVERNMENT CENTRAL PRINTING OFFICE.

VOLUME II.—APPENDICES.

TABLE OF CONTENTS.

PAGE

Findings of the Commission on examination of the Alleged Hemp Drug Cases of 1892 (pages 1—21).

BENGAL.—Dallunda ... ... 1 & 2
Patna ... ... 2 & 3
Dacca ... ... 3 & 4
Berhampore ... ... 4 & 5
Cuttack 5
ASSAM.—Tezpur ... ... 5 & 6
NORTH-WESTERN PROVINCES.—Benares 7
Agra ... ... 7 & 8
Bareilly ... ... 8 & 9
Lucknow ... ... 9—11
PUNJAB.—Delhi ... ... 11 & 12
Lahore ... ... 12 & 13
CENTRAL PROVINCES.—Jubbulpore ... ... 13 & 14
Nagpur 14
MADRAS.—Madras ... ... 14—16
Vizagapatam 16
Calicut ... ... *ib.*
BOMBAY.—Colaba ... ... 16 & 17
Poona ... ... 17 & 18
Ahmedabad 18
Ratnagiri 19
Dharwar ... ... *ib.*
Hyderabad (Sind) ... ... 19—21
BURMA.—Rangoon 21

Commission's inquiries, and the Reports on the further inquiries submitted through the Superintendents of Asylums to the Commission (pages 22—197).

BENGAL.—Dallunda ... ... 22—39
Patna ... ... 40—46
Dacca ... ... 47—53
Berhampore ... ... 54—61
Cuttack 62
ASSAM.—Tezpur ... ... 63—67
NORTH-WESTERN PROVINCES.—Benares ... ... 68—76
Agra ... ... 77—89
Bareilly ... ... 90—96
Lucknow ... ... 97—105
PUNJAB.—Delhi ... ... 106—112
Lahore ... ... 113—124
CENTRAL PROVINCES.—Jubbulpore ... ... 125—128
Nagpur ... ... 129—138

	PAGE
MADRAS.—Madras	139—149
Vizagapatam	150—151
Calicut	152—153
BOMBAY.—Colaba	154—161
Poona	162—165
Ahmedabad	166—170
Ratnagiri...	171—174
Dharwar	175—176
Hyderabad (Sind)	177—195
BURMA.—Rangoon	196—197

FINDINGS OF THE COMMISSION ON EXAMINATION OF THE ALLEGED HEMP DRUG CASES OF 1892.

I.—**Bengal.**—Taking the information collected in the asylums, supplemented by that collected in the further inquiries, it will be well to consider for each asylum how many cases there are in which hemp drugs in any form may be reasonably accepted as the sole cause, or at least a contributing cause, of the insanity.. We take first the asylums of Bengal. In the returns of 1892 for the Dallunda Asylum, *i.e.*, the Calcutta Native Asylum, there were eighteen cases attributed to hemp drugs in 1892; of these ten cases must be rejected. These may be first considered.

(1) Dallunda. (p. 22-39.)

Case No. 1—(Matabadal Goala).—In this case the Superintendent is of opinion that the man "was always of weak mind and probably of melancholic habit." There is no evidence that the man began to use the drug before he was insane. The history shows that he began to use the drug at the same time as he showed signs of insanity. This fact, though noted in the history, has been overlooked by the Superintendent.

Case No. 2—(Rudra N. Bhattacharjee).—We have here a history of progressive mental deterioration, beginning before he began to use ganja and continued steadily in his history both before admission to the asylum and since. The Superintendent accordingly rejects this case.

Case No. 3—(Uttam Singh).—The Superintendent says, "I do not think that this was a case of ganja insanity, but one of recurrent mania: cause unknown." There is no evidence that hemp drugs had anything to do with causing the first attack in May 1892; and that drug had certainly nothing to do with the similar attack in August.

Case No. 5—(Ramlall Goala).—The Superintendent says, "I consider this to be a case of recurrent mania which has now become continuous and chronic. I do not think that ganja had anything to do with this man's mental disease." The man had apparently no friends, and the asylum papers indicate that the entry in the descriptive roll regarding the alleged ganja habit was based on the fact that the lunatic said "he took ganja." Nothing further has been learned about him; but the Superintendent merely quotes the old opinion regarding his habits in explanation of the entry of ganja as the cause in the asylum registers. This opinion, as already pointed out, was based on a statement made by the man while yet insane.

Case No. 10—(Lallji Das).—The further inquiry shows that this was practically a readmission. The man had previously been admitted into the asylum on three occasions before 1892. The evidence regarding the connection between hemp drugs and this particular outbreak of insanity is conflicting and unsatisfactory. It is not the evidence of any one who knew the man well. On the other hand, there are at least two outbreaks with which these drugs could have had no connection. It does not appear why Lallji (if now sane) was not examined as to his own history.

Case No. 12—(Balak Chutar).—There is nothing to connect this case with ganja except an entry in the descriptive roll. The man is still demented. The Superintendent says, "I cannot think that this man's insanity was in any way caused by hemp drugs. It appears to me to be the result of imperfect development." No further information could be obtained about him. His relatives cannot be traced.

Case No. 15—(Chotu *alias* Motee).—There is no evidence that this man ever indulged in hemp drugs, but clear evidence to the contrary. The Superintendent, who had formerly accepted the police view, rejects it now on further inquiry.

Case No. 16—(Nizamuddin).—There is no evidence of any one at all that this man ever took a single dose of hemp, and he himself denies it. The Commission cannot accept the Superintendent's view as to probability for which no ground is assigned.

Case No. 17—(Poran Patro).—The evidence collected in the further inquiry shows that this man was "not a ganja smoker." His father was a lunatic, so that there was hereditary predisposition. "Sudden grief," which is now assigned as the exciting cause, would be quite an adequate cause in such a case. The Superintendent's suggestion of the possibility of the man's having "taken to ganja or other stimulant to assuage his grief" is unsupported by any evidence.

Case No. 18—(Mahadeo Chamar).—This man was arrested on 22nd December 1892. He was sane when admitted to the asylum on the 26th idem. The papers disclose no sign of insanity after an act of violence on the 23rd idem. There is therefore no proof of mental alienation lasting over 24 hours. The Superintendent's view that this was a case of intoxication, and not insanity, is therefore accepted.

There are three cases in which the abuse of hemp drugs, though one of the possible causes, is not the sole cause of insanity. These cases may be taken as "mixed" cases—

Case No. 7—(Mihir Lal Dey).—This man was addicted to liquor as well as ganja. The Superintendent's opinion is that "this man's insanity was due more to excess of alcohol than anything else."

Case No. 8—(Nafir Chandra Dey).—In this case we have an indication of heredity in the fact that his "younger sister and cousin are insane." We have also clear proof of the liquor habit and of sexual excess as well as of the abuse of ganja.

Case No. 14—(Hari Mohan Chatterji).—The father of this young man stated that he "is constantly smoking ganja and drinking wine, brandy and bhang."

There remain five cases which may be accepted as being, so far as is known, due to hemp drugs alone—

Case No. 4—(Shama Charan Kar).—This man was not insane when admitted into the asylum. But further inquiry into his previous history affords sufficient ground for attributing this attack, as well as a previous attack, of temporary insanity to the abuse of ganja.

Case No. 6—(Guru Parshad).—This man was quite sane in the asylum. There can be no doubt that he habitually used ganja; and as there is no other apparent cause, this has been accepted as the cause of his temporary insanity on this as well as on a previous occasion.

Case No. 9—(Ramkissen Panda).—The statement of the descriptive roll that the man was addicted to ganja and siddhi is corroborated by his own statement after he recovered his reason. This is a reasonably probable cause of his temporary insanity.

Case No. 11—(Mongla *alias* Mahomed Syad).—In this case we have a history of opium (not in the form of "chandu" as stated by the Superintendent) and ganja, and no other apparent cause for the insanity. Ill-health may have rendered the man more susceptible to the effects of ganja.

Case No. 13—(Fatteh Ram Singh).—In this case there is a clear history of ganja and no other established cause.

Thus in the Dallunda Asylum out of the eighteen cases shown as hemp drug cases in 1892, we have ten which are rejected, three that are "mixed" cases, and five that seem due to hemp. These conclusions are based on a consideration of the information collected in the asylum and in the further enquiry and of Dr. Walsh's evidence before the Commission.

In the Patna asylum returns for 1892 eight cases were attributed to hemp drugs. Of these five must be rejected—

(2) Patna. (p. 40-46.)

Case No. 1—(Salik Patick).—Here we have in the further inquiry clear evidence of relatives and neighbours to the effect that the lunatic did not use ganja. There is insanity

in the family; and the man's insanity is attributed "to fright in a dream." In this case we have an illustration of an entry of cause being based on information given by a village chaukidar.

Case No. 4—(Siba Thakur).—The further inquiry in this case shows that the use of ganja was in small quantities; that the man first became mad in jail where he had no ganja; and that he was addicted to excessive sexual indulgence.

Case No. 5—(Maghan Gir).—This is not an 1892 case. It belongs to 1891. It was a merely formal readmission in 1892. It is excluded merely as not belonging to that year.

Case No. 7—(Ram Sarup Das).—The further inquiry proves conclusively that ganja had nothing to do with the insanity, as the man did not use hemp at all. The probable causes were fever and reverses in fortune. The Magistrate and Civil Surgeon declare the entry regarding ganja in the descriptive roll to be inexplicable.

Case No. 8—(Adit Misr).—This man's insanity was ascribed to ganja, because he is said to have admitted ganja smoking when received into the asylum. He now denies having used the drug, and the descriptive roll distinctly says that he did not use it. This is an illustration of the impropriety of basing an opinion on statements made by insane persons.

There is one case which may be regarded as a "mixed" case, namely—

Case No. 6—(Bihari Runiar).—This man was addicted to drink as well as ganja; but the circumstances seem to indicate that the latter may have had most to do with the insanity.

There are two cases which seem due to ganja alone :—

Case No. 2—(Kali Singh).—Further inquiry proves that this man was clearly an excessive smoker.

Case No. 3—(Gajadhar Ahir).—The further inquiry shows that this man's former attack, as well as the present, may reasonably be attributed to ganja smoking.

These conclusions are based on the paper submitted by Dr. Bovill to the Commission, in which he carefully and accurately summarizes the result of the further inquiries conducted in these cases.

(3) Dacca. (p. 47-53.)

In the Dacca Asylum returns for 1892 fifteen cases were ascribed to hemp drugs: of these ten must be rejected—

Case No. 1—(Charan Das).—The only ground for attributing the insanity to ganja in this case is an entry in the register for 1864, that the man "is addicted to ganja." He had then been nine years insane. Dr. Cobb very reasonably rejects this case.

Case No. 4—(Uzir Ali Sha).—The alleged connection of the insanity with ganja is disproved in the further inquiry. It is found that this man was never known to have used ganja, and certainly had not used it for years before he became insane.

Case No. 5—(Swarup Kaibarta).—The further inquiry shows that the insanity was due to "emotional" excitement, not to ganja. The man is reported to have occasionally smoked ganja without noticeable effect. But his insanity is distinctly connected with a "violent scene" arising from his improper intimacy with a married woman.

Case No. 6—(Sheikh Waris).—The further inquiry shows that the insanity was due to "grief and anxiety," not to ganja. The previous papers had shown "not a particle of evidence" to connect the alleged insanity with hemp drugs, as Dr. Cobb says; and the further inquiry has fully accounted for it on quite other grounds.

Case No. 7—(Durga C. Chunga).—The ganja habit is disproved in the further inquiry. The further inquiry fully confirms Dr. Cobb's previous opinion.

Case No. 8—(Madhavram Dev).—Ruin from business losses led to mental aberration. There is nothing to show that the man used ganja before this mental aberration began. The habit was not known till afterwards.

Case No. 9—(Gagan C. Chathati).—The further inquiry shows that this man never used ganja, but had taken to alcohol owing to mental troubles.

Case No. 10—(Garua).—There is no evidence that this man used ganja, except an entry as to habit in the descriptive roll, quite unsupported. Nothing was known of the man. The then Superintendent, though the Overseer entered the cause as "ganja," was doubtful about this being a toxic case. The man is not improved. And the ganja habit has not been established.

Case No. 12—(Manohar Mahanta).—Dr. Partridge (Assam witness No. 22), in his evidence before the Commission, shows that he had formed no opinion as to the cause of insanity. Dr. Cobb points out that there does not seem to have been any knowledge of this man, and the entry in the descriptive roll is not trustworthy. There is no improvement.

Case No. 15—(Narayan Das).—This is the same as case No. 11, which is discussed below and is therefore struck off.

There is one case that may be regarded as a "mixed" case—

Case No. 3—(Baishmar Chandra Saha).—Heredity is proved in the further inquiry and also "business losses," which are a quite adequate exciting cause. The evidence regarding the ganja habit is in some respects vague; but the fact of the habit seems established.

In the remaining four cases the insanity seems reasonably attributable to hemp drugs alone—

Case No. 2—(Dayal Dass).—Dr. Cobb's evidence regarding this man leaves no doubt that this may be accepted as a ganja case. The gradual growth of the habit of excessive smoking is well described by Dr. Cobb in his evidence.

Case No. 11—(Narayan Das).—This man is now sane, and, according to Dr. Cobb, confirms the statement made in the papers that he used ganja to excess.

Case No. 13—(Narayan Nawa).—This case is treated by Dr. Partridge in much the same way as case No. 12 (*supra*). It is decidedly a doubtful case. But in view of the fact that Dr. Cobb accepts the case, it has not been rejected.

Case No. 14—(Padai Ram).—This case rests on nothing but the descriptive roll. But the entries therein seem to have been framed after a full inquiry and to be reasonable in character. Though far from being a certain case, it is accepted.

In coming to these conclusions regarding these cases the note submitted by Dr. Cobb has been considered, as well as the information collected in the asylum and in the further inquiry under Dr. Russell.

In the Berhampore Asylum eleven cases were attributed to hemp drugs in 1892; of these seven must be rejected— (4) Berhampore. (p. 54-61.)

Case No. 3—(Karanu Shaha).—Further inquiry proves that the man did not take ganja. He became suddenly insane at the age of eleven years. This attack has never been attributed to ganja. The lad has had several attacks since. This had been accepted all along in this case, until Dr. Meadows, in March 1894, recorded an admission alleged to have been made by this man that he had smoked ganja. This admission does not touch his early history. Dr. Meadows, on noticing the lad's early history, withdrew his opinion that the case might have been due to ganja.

Case No. 4—(Bihari Jolaha).—This man was sent to jail on 18th March 1891 and did not become insane until a year after. He had shown "weakness of intellect" from the time of his admission to jail. Although further inquiry shows that he had been a moderate smoker, the outbreak of insanity which occurred more than a year after his admission to jail cannot be attributed to ganja.

Case No. 5—(Kanai Lall Dubé).—Nothing is known of this man except that he "is an up-country man and came to the district shortly before his arrest in an insane state." How the police made the entry professing to know his habits "for a long time" is not explained. There was no one who could have given any information about his history; and the man himself was insane at the time.

Case No. 6—(Ramnarain).—There is nothing known of this man and nothing to connect his insanity with ganja, except a statement made by him, while still insane, that he used the drug. The Magistrate distinctly states that the man is not in a condition to give any information, and that there is no one who knows anything about him.

Case No. 8—(Kanta Dubé).—The further inquiry shows that nothing can be ascertained about this man. "Nothing was known of his past history" when the descriptive roll was drawn up; and the police entry that he formerly used ganja was probably based (if not a mere guess) on such a statement made by him as he made in the asylum while still insane. On the other hand, there is a clear history in the asylum of syphilis.

Case No. 9—(Arjun Upadhya).—In this case the evidence recorded in the further inquiry shows conclusively that the man did not take hemp drugs in any form. The Commission do not understand why the Superintendent of the Asylum should attach more weight to the descriptive roll than to the evidence now recorded. He does not explain.

Case No. 11—(Purna Chandra Rishi).—There is no mention whatever of ganja in the criminal record; and the further inquiry now made shows that the theory that the insanity was due to ganja was started to conceal a grave family scandal.

There is one case which may be accepted as a "mixed" case—

Case No. 2—(Pitambar Singh).—A younger brother of this man is insane. There is thus an indication of heredity as well as a history of the use of ganja and bhang.

There are three cases which may be accepted as due to hemp drugs alone—

Case No. 1—(Surat Chandra Ghose).—It appears that the lunatic's brother was probably responsible for the entry of ganja in the papers as the cause.

Case No. 7—(Hari Das).—The further inquiry, while suggesting some doubt as to the genuineness of this case, contains a clear history of the use of ganja.

Case No. 10—(Mangal Sen).—This case depends only on the previous papers, and can only be regarded as possibly due to ganja. All that can be said is that there is no apparent reason for rejecting the entries in the descriptive roll.

It is noteworthy that in three cases the allegation regarding cause in the descriptive roll is erroneously ascribed to the Civil Surgeon in the further report. This mistake indicates want of care in the examination of the papers.

Case No. 1—(Bira Das).—There is only one case shown as due to hemp drugs in the Cuttack Asylum returns for 1892. The whole history of the case shows that ganja had nothing to do with it. The ganja alleged to have been given by a bairagi was given after the lunatic had left the Raja's service through madness. There seems to have been no suspicion of ganja on the mind of any one; but somehow this was shown as the cause (without any record of the reason) after the man had been years in the asylum. This case should also be rejected as belonging to 1879, not 1892. It was a merely formal readmission in the latter year.

(5) Cuttack. (p. 62.)

II.—**Assam.**—In the Tezpur Asylum there were thirteen cases attributed to ganja in the returns for 1892. Of these entries of cause only one was made by the Overseer; the remaining twelve were made by his subordinate, the Jamadar. The Superintendent, Dr. Macnamara, disavows these entries in his oral evidence before the Commission. The efforts to obtain more

Tezpur. (p. 63-67.)

information by further inquiries failed, as the lunatics and their friends could not be traced. But fortunately Dr. Mullane (Assam witness No. 13) was able to give in his oral examination before the Commission valuable information regarding seven of these cases which had passed through his hands. Out of these thirteen cases, the Commission have rejected ten—

Case No. 1—(Uchit Ram).—This man was a garden coolie and nothing is known about him. The Jamadar's entry of ganja as the cause of insanity is not supported by the papers. There is a habit entry that "the lunatic sometimes smokes ganja and takes liquor." But the insanity is attributed to neither.

Case No. 2—(Akhilananda).—Ganja was entered by the Jamadar as the cause without any authority in the papers. They did not mention the drug in any way. Dr. Mullane shows that this was not a ganja case.

Case No. 4—(Saheb Ram).—Dr. Mullane shows that "there was no suspicion of ganja in the case," of which he, at the time, received a full account.

Case No. 5—(Jaganath).—Dr. Mullane shows that the insanity had nothing to do with ganja. The man was epileptic and "had a curiously malformed head."

Case No. 6—(Khadu).—The allegation that the man ever used ganja is based solely on a statement he made when insane "that he was addicted to ganja and spirituous liquor." This statement cannot be accepted. Dr. Mullane does not think the insanity was due to ganja.

Case No. 9—(Bapu Ram).—Dr. Mullane did not regard this as a ganja case. The man "had a remarkably small brain development." He had been discharged from the police for insanity many years before. The event showed that he had not been fit for discharge from the asylum as he had an outbreak of homicidal mania immediately after.

Case No. 10—(Jagodhar).—There is nothing definite in the papers to show that the use of ganja preceded the onset of the insanity three years before the man's admission to the asylum, and there was no mental improvement up to the time of his death.

Case No. 11—(Mussamat Major).—The papers only show the use of ganja by this woman when already insane, and there was no improvement.

Case No. 12—(Mussamat Bedoma).—The papers show heredity; the woman's father was insane. They show that nothing is known of the woman's personal history or habits. They make no mention of ganja. There was no mental improvement. The Jamadar's entry is not explained.

Case No. 13—(Mussamat Kitni).—The papers contain no mention whatever of ganja, but distinctly state that nothing is known of the woman's past history; and the entry by the Jamadar is not explained.

The remaining three cases have been accepted as "mixed" cases—

Case No. 3—(Jalim Ghatwai).—In this case the papers show heredity as well as the use of ganja. The case is an interesting one in view of the coincidence of both insanity and the ganja habit in both father and son. It may be noted also that the man was never insane in the asylum; yet the type is shown as "melancholia."

Case No. 7—(Kisto Dass).—Doubt arises in this case from the recurrent character of the insanity and the fact that there is nothing beyond the descriptive roll to guide us as to cause; but as it is stated clearly that he smoked "dhatura leaves with ganja," the allegation that his insanity is due to this may be accepted, as no other cause is apparent.

Case No. 8—(Chadi Gond).—The descriptive roll shows that this man used both ganja and liquor, and Dr. Mullane thinks the symptoms consistent with the ganja theory.

In this asylum there is no case clearly attributable to hemp drugs alone.

III.—North-Western Provinces.—In the Benares Asylum only six cases were set down to hemp drugs in the returns for 1892. Of these only one has been rejected—

(1) Benares. (p. 68-76.)

Case No. 1—(Bhawanidin).—It was shown by a perusal of the record of the trial in this case, that the Magistrate had attributed the insanity to ganja in direct contradiction to the evidence. There was nothing to explain his action.

Five cases have been accepted as due to hemp drugs alone—

Case No. 2—(Ramdas).—The descriptive roll attributes the insanity to ganja, and this is corroborated by Ramdas' statement after recovery.

Case No. 3—(Bhagwoti Pershad).—The symptoms led the Superintendent to doubt this being a case of toxic insanity ; but the further inquiry gives a clear history of the abuse of ganja and bhang, and no other cause can be assigned.

Case No. 4—(Ramlal).—The further inquiry shows that the man was addicted to bhang, and no other cause can be assigned.

Case No. 5—(Hinganlal).—Here also the bhang habit is established and seems to have led to two previous attacks of insanity.

Case No. 6—(Ram Smair).—This is a somewhat doubtful case ; but there appears in the evidence collected in the further inquiry sufficient ground for believing that bhang, which the young man occasionally used, may have at least contributed to his insanity.

An interesting feature of the Agra returns is the substitution of charas for ganja in the districts which lie far to the north-west. In this asylum eighteen cases were attributed to hemp in 1892 ; of these eleven must be rejected—

(2) Agra. (p. 77-89.)

Case No. 2—(Motilal).—In this case the further inquiry clearly shows that on his mother's side Motilal had a strong hereditary predisposition to insanity, and that grief, business anxiety and mental strain were the exciting causes.

Case No. 3—(Gopal).—This man indulged in hemp drugs ; but there is no evidence that he did so before he became mad. The opinion of the Joint Magistrate and Civil Surgeon of Jhansi (which is adopted by the Superintendent of the Asylum) is based on the assumption that he had indulged in the drugs for ten years and been mad only five. But the papers show that he had been mad for ten years.

Case No. 8—(Narain Khatri).—The further inquiry shows that this man has six brothers, of whom one went mad at the same time as Narain. It has been established that neither of them took ganja or charas before becoming mad. Both took to these drugs subsequently. Narain's madness "began with bad attacks of fever."

Case No. 9—(Nemur Passi).— This man was apparently not insane in the Asylum. The statement that the alleged temporary insanity was due to charas seems to be based on nothing except a statement made by the lunatic while still insane to the effect that he took bhang (sulfa) twice a day. Nothing more can be learned about him.

Case No. 10—(Murli Singh).—The further inquiry shows that this man "was never addicted to smoking charas, but that he was addicted to drink."

Case No. 11—(Bhowani Teli).—No trace of this man can be obtained. The papers make no mention of hemp drugs, while they do show that his mother had been insane. There is nothing to show why Dr. O'Brien entered "ganja" (with a query) as the cause. But he clearly had not accepted this view finally.

Case No. 12—(Kundan Lall).—The use of hemp drugs is disproved in this case. Syphilis from which the lunatic suffered is suggested by the Superintendent as a possible cause of insanity.

Case No. 13—(Jhalka Rachhi).—Further inquiry shows that there is no evidence of the use of hemp drugs. There was no history of a hemp drug habit; and the brother of the lunatic now says he never used hemp.

Case No. 14—(Tulsi Bania).—Further inquiry shows that there is no ground for attributing this case to hemp drugs. The Joint Magistrate and Civil Surgeon of Jhansi report that "the impression that his insanity was due to hemp drugs appears to have rested mainly on his own statements to the Civil Surgeon. From the statements now made before us this appears to have been an hallucination on his part." The lunatic's father declares that he never indulged in hemp drugs at all.

Case No. 15—(Ralla Singh).—As the Superintendent says, "there is no evidence of indulgence in bhang," it is not clear why in spite of this he should attribute the insanity to this cause from the symptoms. Apparently he bases this opinion on the transient character of the mania. This cannot be accepted.

Case No. 18—(Hari Kishor).—Nothing further can be ascertained about this man. Even his home is "not known." The insanity is ascribed to charas "from his own statement" in an entry in the asylum register, which also records that he "talks nonsense." This, of course, cannot be accepted.

There are two out of the eighteen cases which may be accepted as "mixed" cases—

Case No. 16—(Kishan Lall).—The further inquiry shows that this man was given to sexual excess as well as to charas. His brother adds: "In his youthful days he contracted syphilis and then he took to drugs." He used opium as well as ganja.

Case No. 17—(Ganga Lohar).—The further inquiry shows that this man's father's brother was insane. There was probably therefore hereditary predisposition. But there is good ground for thinking that the insanity may have been directly due to the abuse of hemp in all its forms.

In the remaning five cases it seems reasonable to believe that hemp alone may have caused the insanity. In four the cause is the abuse of charas. In one (Krishna Parshad) the insanity is attributed to bhang—

Case No. 1—(Ram Lall).—The evidence collected in the further inquiry seems to show that charas smoking was the cause of insanity.

Case No. 4—(Jugla).—This man seems to be an excessive consumer of charas, and the resumption of the habit appears to have brought on a second attack of insanity.

Case No. 5—(Deoki Das).—Nothing more can be learned of this man. The insanity was attributed to charas on the authority of a statement he made apparently after recovering his reason.

Case No. 6—(Krishna Parshad).—This case is precisely like the last, except that bhang, not charas, is the cause assigned.

Case No. 7—(Gulab, Mussalman).—This also is a similar case. No doubt in these three cases there must be some hesitation in accepting the statement alleged to have been made in the asylum by the lunatics. But it is best to do so, as the statement seems to have been made after the lunatics' recovery in each case and to have been accordingly accepted by the Superintendent.

(3) Bareilly. (p. 90-96.)

In the Bareilly Asylum returns for 1892, eleven cases were attributed to hemp drugs. Of these, five must be rejected—

Case No. 1—(Nathu).—The further inquiry shows that this man never took intoxicants before he became insane. It was not till "after he lost his senses" that he was seen to take charas.

Case No. 2—(Fackeray).—The evidence collected in the further inquiry from the man himself, his mother and his friends, shows that this man never used charas, and the entry in the descriptive roll seems to be without foundation.

Case No. 5—(Dariao Singh).—The further inquiry establishes heredity, Dariao's father and two sons being insane; but there is no satisfactory evidence of the use of hemp drugs. The evidence on this point was conflicting.

Case No. 7—(Bhowani Singh).—"The Civil officer who conducted the further inquiry in consultation with the Civil Surgeon, reported that * * * 'the only reason they (Bhowani Singh's mother and brother) are able to suggest for his going mad is that he smoked some charas at the Holi festival. He never smoked before or since, or used any intoxicant.'" In accepting this suggestion as to cause, the Superintendent has overlooked the fact that this was Bhowani's fourth attack of insanity. If the man never smoked before the occasion referred to, his recurrent insanity cannot have been due to smoking. Of course, the smallest excitement or indeed no apparent cause, may bring on a fresh outbreak of recurrent insanity; but the insanity itself must clearly be due to some cause, predisposing or otherwise, which existed before the first outbreak.

Case No. 10—(Balak Rám).—The further inquiry shows heredity, and that bhang was not the cause.

There are four cases which may be accepted as "mixed" cases—

Case No. 3—(Moti).—The insanity followed immediately on a bereavement; but the lad was a charas smoker, and this may have rendered him more predisposed to mental breakdown.

Case No. 4—(Jamna).—There is no further information about this man. The cause "fever" mentioned in the papers cannot be ignored, but the case (especially in view of the previous seizure in March) is more probably due to charas smoking.

Case No. 8—(Devi).—This man cannot be traced. The descriptive roll ascribed the insanity to "ardent spirits and ganja."

Case No. 9—(Shamsher Bahadur).—Further inquiry shows that this man was addicted both to liquor and charas.

The remaining two cases may be set down as due to hemp drugs without other apparent cause.

Case No. 6—(Mahangu Singh).—The further inquiry seems to show that insanity was due to the excessive consumption of bhang.

Case No. 11—(Niadar).—This is a doubtful case: it is attributed to one *chillum* of charas, and it is not certain "whether any other drug was mixed with the charas." It is only possible the charas may have been the cause.

In the Lucknow Asylum seventeen cases were attributed to hemp drugs in 1892. Of these, thirteen must be rejected:—

(4) Lucknow. (p. 97-105.)

Case No. 1—(Jaffir Ali).—In this case the descriptive roll distinctly stated that "the insanity is not attributable to over-indulgence in ardent spirits or in bhang, ganja or similar drugs." The Superintendent, however, takes his stand on a statement, alleged to have been made in May 1890, by a brother of the insane man who visited him during a previous period of confinement. There is no record of this alleged statement to enable one to judge of its value; and it is distinctly contradicted by the evidence of the three witnesses examined in the further inquiry and cannot be accepted. The careless manner in which such alleged statements are entered, sometimes long after they are believed to have been made, renders it impossible to attach weight to this alleged statement in face of the clear evidence to the contrary.

Case No. 5 —(Manohar).—In this case the further inquiry clearly disproves the use of ganja; yet the Superintendent holds to his original entry on the strength of a vague statement in the descriptive roll, although there is a perfectly adequate cause for insanity in the death of the man's wife.

Case No. 6 —(Ramcharan).—In this case there is indeed the history of the occasional use of bhang "every third or fourth day;" but the word "intoxicated" does not necessarily mean that that occasional use was excessive. This lad has a brother. Both of them became insane at the age of 21. The brother never takes intoxicants. In Ramcharan's own case the descriptive roll attributed the insanity to overstudy.

Case No. 7—(Durga).—The Superintendent accepts this as a ganja case, because the man was "a confirmed ganja smoker." But he omits to notice that the man's history is that he had suffered from recurrent insanity for twenty years; that there is no evidence that he took ganja before he became insane; and that business losses are assigned as the cause of the first attack.

Case No. 8 —(Kirhi).—The Superintendent bases his opinion solely on the police statement that the man used ganja. The Civil Surgeon of Sitapur, who had the case originally, and has again considered it, is of opinion that there is not sufficient ground for believing that the insanity was due to ganja, and seems to suggest a beating as having perhaps, some connection with the attack. Dr. Hooper's abstract of the Civil Surgeon's opinion in this case is very incomplete.

Case No. 10—(Parag).—In this case also Dr. Hooper gives a very inadequate abstract of the Deputy Magistrate's report. Dr. Hooper also seems to attach undue importance to the entry in the descriptive roll, merely because it was made by the Cantonment Magistrate, although the grounds of it were not given. On the other hand he disparages the present inquiry, of which the records were before him, because it was "made by a native." The Deputy Magistrate's inquiry was full and satisfactory: it is correctly summarized in his report. The Commission accept his conclusion.

Case No. 11 —(Bindeshwari Singh).—In this case the Joint Magistrate who conducted the further inquiry is spoken of by the Superintendent as "the reporter;" and the report is very incompletely abstracted. It appears that the man's consumption of bhang was extremely moderate and that his insanity is universally ascribed to grief at the loss of his father, which occurred when he was in very bad health.

Case No. 12 —(Bihari).—Nothing more can be learned of this man. The only ground for ascribing his insanity to hemp drugs is that while still insane he said "he was a ganja smoker." He never recovered his reason. The symptoms, "bloodshot eyes and violence." relied on by the Superintendent, are certainly not typical of hemp drug insanity.

Case No. 13—(Ramanand).—The ground for ascribing this man's insanity to hemp is that when in the asylum and insane "he sometimes recognises bhang and sometimes says he used to drink it occasionally; sometimes he says he did not". The report of the further inquiry is imperfectly abstracted by the Superintendent and is erroneously attributed by him to "a native official." The statements of the residents of the village recorded at the further inquiry clearly prove that the man was not a consumer of hemp.

Case No. 14—(Mahadeo).—In this case the Superintendent suppresses the Deputy Commissioner's condemnation of the original police report on which he relies. The further inquiry shows that the boy did not use hemp, and that both this attack and a previous attack of insanity were preceded by fever.

Case No. 15—(Raghunath).—The further inquiry shows that this man did not use hemp or other intoxicants, and suggests grief as the case of his insanity; yet the Superintendent relies on a statement alleged to have been made by the lunatic, while still insane, that he smoked ganja. The Superintendent also omits in his abstract any reference to the suggestion regarding grief.

Case No. 16—(Baldeo).—This man was not insane either when under the Civil Surgeon's observation or in the asylum. There is actually no professional opinion that the man was insane; yet Dr. Hooper finds that the case was "something like delirium tremens." In the circumstances it is scarcely necessary to consider causation. But it may be noted that there was hereditary predisposition, and that a previous outbreak was attributed to fever. That was the first attack.

Case No. 17—(Mullu).—This man also was not insane. There is no professional opinion as to the fact of insanity. As to habits, he (when sane of course, for he was never seen insane) "admitted that he had been drinking spirits freely and a little bhang very often."

There is one case which may be accepted as a "mixed" case—

Case No. 2—(Mithu).—In this case the further inquiry shows clearly the use of liquor and tari (as also opium) as well as ganja.

The remaining three cases may be accepted as reasonably attributable to hemp drugs alone, no other contributing cause being known—

Case No. 3—(Madan Lall).—Further inquiry shows that this man was given to the excessive use of ganja and charas, and no other cause of insanity is known.

Case No. 4—(Lalta).—This man cannot be traced. The statements contained in the original papers are accordingly accepted, as they receive some measure of support from the fact that the Superintendent certifies that the man "had a ganja corn on his right thumb."

Case No. 9—(Jagmohan).—The further inquiry seems to disprove the allegation that madness was in the family and to leave charas as the only established cause of insanity in this case.

It should perhaps be noted, as a possible explanation of the incompleteness and even grave inaccuracy found to characterise some of the abstracts submitted by the Superintendent of the "facts ascertained from local inquiries," that these abstracts may have been prepared not by Dr. Hooper, but by some subordinate. Dr. Hooper may have confined himself to filling up the fifth column of his final report. It is hardly possible that Dr. Hooper could have himself read and abstracted the papers in these cases.

IV.—Punjab.—In the Punjab the asylum cases would seem to show that ganja is little known, and that charas is the form in which hemp is usually smoked. In the Delhi Asylum there were ten cases attributed to hemp in 1892. Under circumstances explained by the Superintendent in his letter No. 12, dated 13th January 1894, the papers and registers for 1892 were found by the members of the Commission, who visited the asylum, to be in an unsatisfactory state. It was found, among other defects, that entries regarding cause have been made in several cases by the Deputy Superintendent without authority and without good ground. Surgeon-Major Dennys took some trouble regarding the further inquiry, and he has reported carefully on each case. It is, however, much to be regretted that in none of the ten questions drawn up for guidance in that inquiry was any reference made to any other cause of insanity than hemp. Even the reference to drink distinctly made in the original papers in Case No. 9 is not inquired into, and no attempt is made in any case to ascertain whether any other cause than hemp could be discovered. This is surprising in view of the clear instructions issued by the Commission and quoted in the report.

(1) Delhi. (p. 106-112.)

Of the ten cases above referred to five must be rejected—

Case No. 3—(Hari Ram).—Nothing can be ascertained about this case; the Superintendent remembers nothing of it; and the papers have no reference to hemp drugs.

Case No. 4—(Narain Singh).—The use of hemp is disproved. The man "had never been in the habit of using hemp in any form," and "there was never any suspicion that the case was one of toxic insanity."

Case No. 5—(Charata).—The use of hemp is disproved. The man "himself (now sane) and his brother-in-law both testify that he never used the drug.

Case No. 6—(Sheri).—The use of hemp is disproved. It has been ascertained that the man never used hemp or intoxicating drugs of any kind.

Case No. 8—(Dhuman).—Nothing more can be ascertained regarding this man. The paper shows that the man's mother was insane. There is no proof of the ganja habit, except his own statement while still "violent and incoherent."

One case has been accepted as a "mixed"—

Case No. 1—(Daya Lall).—This man took bhang to excess and mixed with dhatura, and also used charas. The use of dhatura, as the excessive habit developed, is interesting.

Four cases have been accepted as due to hemp drugs alone, no other cause being discovered.

Case No. 2—(Nath).—The further inquiry shows that he was a confirmed smoker of both charas and ganja.

Case No. 7—(Joseph Lalchand).—Indulgence in charas rests on the statement of a Native Baptist Missionary.

Case No. 9—(Adhan).—The further inquiry shows that the man was addicted to charas-smoking.

Case No. 10—(Nand Lall).—The man attributes his insanity to charas and has given up the use of the drug since recovery from his last attack of insanity.

In coming to these conclusions, the Commission have considered Dr. Dennys' oral evidence as well as the information collected in the Asylum and in the further inquiries. They have been able to accept Dr. Dennys' views.

In the Lahore Asylum twelve cases were attributed to hemp drugs in 1892. Of these three must be rejected—

(2) Lahore. (p. 113-124.)

Case No. 4—(Maula Dad).—In the further inquiry the only witness that was found showed that this man, who died in the asylum immediately after admission, never used bhang or other form of hemp. There are no grounds known for the entry in the descriptive roll.

Case No. 9—(Ida).—The evidence in the further inquiry is against the use of hemp, while it proves that this man's brother was an epileptic and died in a lunatic asylum. Dr. Coates very properly rejects the alleged statement of Ida (while insane) that he used hemp.

Case No. 10—(Subhan).—The Superintendent points out that there is no evidence of the use of hemp by this man. The only evidence is that of his brother that he did not use the drug. The Superintendent omits to add that the papers show that he was an epileptic.

Three out of the twelve cases may be accepted as "mixed" cases—

Case No. 3—(Mahtab Din).—As the Superintendent says, this is a doubtful case; but there is a history of the use of both alcohol and hemp drugs.

Case No. 8—(Mussamat Mooran).—Grief, prostitution, and her hard life may have contributed to this woman's insanity. There is also evidence of the use of bhang and sometimes liquor.

Case No. 11—(Dullo).—This man, while yet a child, acquired the habit of smoking both madak and charas.

The remaining six cases may be accepted as reasonably attributable to hemp alone, no other cause being established—

Case No. 1—(Kadir Baksh).—This man and his father both assert that he used bhang.

Case No. 2—(Mana Singh).—Dr. Coates seems quite to have misread Dr. Mulroney's report. He is mistaken in saying that "his mind and temper were in youth uncertain and unstable. He had no peculiarity; and his father has always attributed his insanity to bhang drinking."

Case No. 5—(Somirgir).—The statement in the papers is far from conclusive, but no further information can be obtained. That statement is therefore accepted.

Case No 6.—(Mohna).—This man, now quite sane, gives an intelligent account of his acquiring the habit of charas smoking and attributes his insanity to that drug.

Case No. 7—(Tehl Shah).—Opium and syphilis are both mentioned as possibly contributing to this man's insanity; but the most definite information is about hemp, which he consumed in the forms of bhang and charas.

Case No. 12—(Jinda Shah).—This is apparently a very bad case of excessive use of hemp. This wretched man used even to pick up the dregs thrown away by bhang drinkers and eat them.

Dr. Coates' oral evidence, as well as the information collected in the asylum and in the further inquiry, has been considered in coming to these conclusions.

V.—Central Provinces.—In the Central Provinces we return to a ganja-consuming country and hear nothing of charas. In the Jubbulpore returns for 1892 there were six cases attributed to ganja or bhang. But there is not satisfactory ground for accepting this as the cause in five cases. All these five cases are rejected—

(1) Jubbulpore. (p. 125-128.)

Case No. 1—(Rathi Ram Singh).—The cause of insanity was entered in the papers as "unknown." The man was a passed candidate for the police, and his habits had no doubt been inquired into. As long as he was in his own village he never smoked ganja. This is established by evidence. On the other hand the police enquiry into his later habits, though they were likely to be known, disclosed no use of hemp. The only ground for attributing the insanity to ganja was the man's own statement now alleged to have been made in the asylum. But there is no record of that statement, and it was not known to Dr. Gaffney when the asylum was visited after the man's escape.

Case No. 2—(Dalthaman Singh).—The only ground for attributing the insanity to ganja in this case was an alleged admission of the ganja habit by the lunatic in the asylum. He now denies the habit and states that he has no recollection of having made the admission.

Case No. 3—(Umrao Gond).—The second attack in this case occurred in jail, where the man suddenly murdered a warder without provocation. As to the origin of the first attack, Dr. Gaffney hardly summarises correctly what the Civil Surgeon said at the man's trial. There was hereditary predisposition, for the man's grandfather was insane; and the explanation that "possibly insanity was coming on gradually and measles accelerated it" seems quite adequate in that case. His people say that the insanity came on after an attack of measles. The Civil Surgeon at first stated that, hearing that the man took both alcohol and ganja, he would conclude that these were the cause of insanity; but afterwards he accepted the explanation of the friends as given above.

Case No 5—(Gulbia).—There is no proof here that the man ever used ganja before becoming insane, but distinct evidence that he did not. After becoming insane, he used both liquor and ganja.

Case No. 6—(Hari).—There is no evidence of the ganja habit except the man's own statement made while still insane, and the further report of the Civil Surgeon is clearly against the theory that ganja caused the insanity.

The one remaining case has been accepted as a "mixed" case—

Case No. 4—(Udai Ram).—Here there is, as the lucid account given by the Civil Surgeon of Khandwa shows, a clear history of excessive use of ganja as well as of syphilis; and it may be accepted that these two causes might combine to produce the "general paralysis of the insane," of which this man died.

In the Nagpur Asylum seven cases were attributed to hemp drugs in 1892; of these three must be rejected—

(2) Nagpur. (p. 129-138.)

Case No. 2—(Tajodin).—The evidence in the further enquiry shows that this man did not take ganja. His own statement that he took liquor and ganja cannot be accepted; and there is no other ground for ascribing this case to hemp drugs. Dr. Harris clearly shows how untrustworthy such statements are.

Case No. 5—(Rudraya).—There is no history of ganja apart from the man's alleged statement quoted by the asylum clerk from memory. This statement the man now contradicts. When the malguzar and people gave him ganja, if that story is to be accepted, he was already insane. The case is interesting as showing how ganja may be taken by insane persons in such cases.

Case No. 6—(Kalekhan).—There is no evidence of ganja smoking in this case. There is a statement in the papers that "the man is a ganja smoker," but the only evidence obtainable points to liquor and not to ganja. The man was suspected of secret liquor-drinking, and there is a history of bad living and disappointment in love.

There are two "mixed" cases—

Case No. 1—(Atmaram).—In this case there is history of indulgence in stimulants, of liquor in greater degree than ganja, and of "vicious habits." The Superintendent says his condition "resembles an early condition of general paralysis of the insane." Altogether this is a doubtful case, but may be accepted as "mixed."

Case No. 4—(Akbar Khan).—The further enquiry shows liquor as well as ganja.

The remaining two cases are, so far as known, attributable solely to ganja—

Case No. 3—(Itwargir).—The further inquiry shows this man to have been "a terrible smoker of ganja."

Case No. 7—(Lachhman).—There is little information about this case, and it is doubtful. But as on both occasions of the man's admission to the asylum the cause of insanity was (without probably any recollection by the police on the second occasion of the first) set down as ganja, the probability is that there was evidence of the ganja habit.

Dr. Harris' report is carefully prepared and interesting. It is necessary, however, to bear in mind that all that is written regarding reflexes, all the careful examination of the symptoms, and the full account of the features of the cases are new. Such records were not made before the present inquiry. These facts then refer to the present state of the lunatics.

VI.—Madras.—In the Madras Asylum seventeen cases were attributed in 1892 to hemp drugs (sixteen to ganja and one to bhang); of these eleven must be rejected—

(1). Madras. (p. 139-149.)

Case No 1.—(Kamal Sahib).—There is no reference whatever to ganja in the papers or in the asylum registers. In his oral evidence, Dr. Dobie (Madras witness No. 84) says: "I must have found that he took ganja," but this can hardly be accepted. Dr.

Dobie's oral evidence as to his procedure forbids weight being attached to the entry of cause in the annual statement.

Case No. 3—(Tanikachellum).—The further report of Surgeon-Major Evans on this case quite misrepresents the results of the inquiry. The evidence clearly disproves the ganja theory. All the witnesses state clearly that this man never took ganja so far as they know. One brother admits the possibility of his having done so when he was absent at Trevellore; but he does not say he thinks he did; and he is positive that he never took it before or since. The insanity is attributed to anxiety.

Case No. 5—(Moorthy Veeraswami).—There is no history of ganja. There is nothing in the descriptive roll to show the ganja habit. And in the further inquiry nothing can be learned of the man. "Probably starvation" (as entered in the asylum register) is as reasonable an explanation as "probably ganja" (in the descriptive roll), especially as the man had recovered and anything about ganja could easily have been learned in the asylum.

Case No. 6—(Madula).—The evidence clearly shows that the man never took ganja, and suggests a quite different and perfectly adequate explanation of the insanity.

Case No. 7—(Pappa).—The further inquiry clearly shows that there is no ground for assigning ganja as the cause of insanity. No body can tell on what authority the late Civil Surgeon made this entry. None of the people had heard about ganja in the case.

Case No. 9—(Nabi Saheb).—There is no mention of ganja in the papers. The man was said to have admitted the use of the drug while insane in the asylum, but subsequently (to the members of the Commission) he denied it altogether. The alleged admission cannot be accepted as trustworthy.

Case No. 10—(Hari Mohanti).—Here again the only ground for attributing the insanity to ganja is that the man is said to have admitted the use. To the members of the Commission who visited the asylum he denied this. The evidence recorded at his trial shows that he took mercury for venereal disease and also took opium, but apparently not hemp drugs. There is one reference to hemp drugs in the record of a statement made by the prisoner on 31st December 1878. But in the statementof 5th March 1879 it is recorded as opium; and the prisoner points out that he was allowed opium in jail. The judge described the man as "suffering from the effects of the excessive use both of mercury and opium."

Case No. 12—(Mahadil Saheb).—Dr. Evans' final report is in this case also inaccurate. He has not read the papers carefully. The further inquiry shows that the man did not take hemp. The inquiry was full and careful; and the relatives as well as the neighbours of the lunatic clearly testify that he never used hemp drugs.

Case No. 14—(Tadiya).—The papers contain no reference to ganja. The only ground for attributing the insanity to ganja is the lunatic's own statement that he took ganja and liquor. The man was fairly rational, but still insane when he made this statement.

Case No. 15—(Dona Papada).—There is nothing in the papers to connect this case with ganja except a "probably" in the descriptive roll. This is unexplained. There is not even any statement that he was addicted to hemp drugs in any form.

Case No. 16—(Mahomed Osman).—There is no reference to ganja in the papers and the man denies the habit. There is no explanation of how the case came to be attributed to ganja.

There are four cases which may be accepted as "mixed" cases—

Case No. 2—(Mustan Saheb).—This case depends on the admission of the lunatic; but when the members of the Commission visited the asylum in September 1893, the man was represented as practically sane, and he gave a very rational account of the use of ganja with dhatura leaves. It is not considered safe therefore to reject this case.

Case No. 11—(Kunji Kalappen).—The further inquiry shows that alcohol, sexual excess, and ganja may all have contributed to the insanity.

Case No. 13—(Coopen).—Dr. Evans in his final report neglects altogether to notice the clear statement of this man's brother, that the luantic's frequent attacks of insanity were always preceded by "fits," apparently of epilepsy. The case must be accepted as a mixed case, due to ganja and alcohol acting on a neurotic diathesis evidenced by epilepsy.

Case No. 17—(Abdul Kadir).—Besides the mention of ganja in the papers there is also mention of heredity. The man's father was insane.

The two remaining cases have been accepted as soley due to hemp drugs—

Case No. 4—(Sheikh Hussain).—This man was sentenced to ten years' imprisonment for a crime committed (as supposed) when he was in a state of intoxication from ganja. Further inquiry shows that he had taken the drug. But his jail and asylum history shows recurrent insanity, the outbreaks of which are quite independent of ganja. This is a doubtful case; but as there is a clear history of the excessive use of ganja before the first outbreak of insanity, the Commission have accepted the case.

Case No. 8—(Ramaswami).—There is nothing here but the entry in the papers ascribing the insanity to ganja. But as the man was a sepoy, and his habits were probably known, it has been accepted.

It cannot be said that Dr. Evans has carefully considered the reports submitted by the officers who conducted the further inquiry into these cases. His conclusion that "cases 8, 11, 12, and 13 seem to have been men who used ganja" cannot be accepted. Only case No. 11 has been accepted of these four. Dr. Evans' phrase above quoted is interesting as bearing out Dr. Dobie's remark in his oral evidence, that "when people find a lunatic takes ganja, they stick it down [as the cause]."

(2) Vizagapatam. (p 150-151.)

In the Vizagapatam Asylum only one case was attributed to hemp drugs in 1892. In this case there was hereditary predisposition; and insanity is now attributed directly to debility, to which several causes (indulging in alcohol and ganja) contributed. But it is impossible to say definitely that ganja did not so contribute. This case is accordingly accepted as a "mixed" case.

(3) Calicut. (p. 152-153.)

In the Calicut Asylum, also only one case was attributed to hemp drugs in 1892. The insanity in this case has been found to be due to hard drinking of toddy and arrack. The man was not given to the use of hemp drugs at all.

(1) Colaba. (p. 154-161.)

VII.—Bombay.—In the Colaba Asylum, thirteen cases were attributed to hemp drugs in 1892. After perusing the records of the further inquiry into these cases Surgeon-Major Boyd proposes to reject eight of these. Apparently, his opinion is that where hemp appears to be only an exciting cause, the case ought not to be regarded as a hemp case. It is impossible to accept this view. Of the thirteen cases, the Commission reject five—

Case No. 2—(Yesu Ragho).—Dr. Boyd's view of this case differs from that of Surgeon-Major Kirtikar (*vide* oral examination of Bombay witness No. 73). But Dr. Boyd's seems the more reasonable view; and it must be noted that though Surgeon-Major Kirtikar now says positively that "the cause was ganja smoking," the papers show that he regarded the cause as "unknown" when he had the man under observation; and the letter quoted by Dr. Boyd shows that Dr. Kirtikar had no record.

Case No. 3—(Moti Ram).—The use of ganja is disproved in the further inquiry. The man's friends deny that he ever used ganja.

Case No. 11—(Dealo).—There is no evidence to support the habit entry in Form C except the statement of the lunatic while still insane. This statement of an insane man

on which the habit entry is probably based, cannot be accepted. The Commission therefore concur with the Superintendent in rejecting this case. They see no adequate ground to believe that ganja was even an exciting cause.

Case No. 12—(Vishnu Laxman).—The Superintendent Dr. Boyd's evidence before the Commission shows not only that the man's father was epileptic, but that the man did not take ganja.

Case No. 13—(Nevel Singh).—There is no history of ganja in this case and no reason to differ from the Superintendent's rejection of this as a ganja case.

There are three cases which may be accepted as "mixed" cases—

Case No. 4—(Damodhar).—The further inquiry seems to show that the death of this man's wife and child led to his indulgence in ganja, bhang and majun; and that his insanity was probably due to grief, combined with the use of these drugs.

Case No. 8.—(Vithu).—This man was admitted to the asylum within a week after the date of the medical certificate, and was by that time quite sane. But the oral evidence of Dr. Kirtikar shows that in these Thana cases sun and malaria are also contributing causes.

Case No. 9—(Gurudatt).—This is another Thana case. The "frequent attacks of fever" with delirium are more a marked feature of the case; but ganja may also have contributed to cause the insanity.

The remaining five cases are accepted as due to hemp drugs alone—

Case No. 1—(Nama).—The history of ganja is said to have been derived from the statements of friends, and seems probable.

Case No. 5—(Moti Hemraj).—There appears to be a reasonable history of the use of the drug, and the Superintendent's reasons for rejecting the case do not seem conclusive.

Case No. 6—(Mahomed Safdar).—It is stated that the cause of this man's insanity was entered as ganja "on the examination of his friends" in the asylum. There does not seem sufficient ground for reconsidering this now. There is no further information about the man.

Case No. 7—(Chintamon).—There is a clear history of the use of the drug here.

Case No. 10—(Birji Makji).—The Superintendent does not seem to have sufficient reason for reconsidering now his former opinion in this case, which was based on the statements of the man's friends.

In the Poona Asylum six cases were attributed to hemp drugs in 1892. One of these cases must be rejected—

(2) Poona. (p. 162-165.)

Case No. 5—(Paras Ram).—There is no evidence of the ganja habit except statements made in the asylum to the members of the Commission. At that time the man was not sane, though his answers had the appearance of being rational. Further inquiry shows that nothing is known in the man's own district of his having used hemp drugs; and Dr. McConaghy's diagnosis "from appearance of patient" can hardly be accepted. In his oral examination before the Commission (Bombay witness No. 69) he abandoned this case.

There is one case accepted as a "mixed" case—

Case No. 4—(Laxman Nand Ram).—There is here a clear history of both liquor and ganja.

The remaining four cases may be accepted as due to hemp drugs—

Case No. 1—(Guljarsha).—No further information can be obtained about this man; and the statements in the descriptive roll, which seem reasonable, are accepted.

Case No. 2—(Rang Nath).—There is a history of the use of bhang, apparently to excess. There are, however, grave discrepancies between (*a*) the previous papers, (*b*) the further report, and (*c*) Dr. McConaghy's evidence in this case.

Case No. 3—(Trimbak).—The hospital papers give a history which justifies the acceptance of ganja as the cause.

Case No. 6—(Hari Trimbak).—The excessive use of ganja is established; and the Superintendent's seems a reasonable explanation of the insanity.

In coming to the above conclusions, the Commission have considered the evidence of Dr. Burke (Bombay witness No. 75) as well as that of the Asylum Superintendent, Dr. McConaghy, and the information collected in the asylum and in the further inquiry.

(3) Ahmedabad. (p. 166-170.)

In the Ahmedabad Asylum nine cases were attributed to hemp drugs in 1892. Surgeon-Lieutenant-Colonel Bartholomeusz was prevented by ill-health from appearing before the Commission for examination, and this ill-health probably accounts for the difficulty experienced in having the further inquiry conducted and reported on satisfactorily. The Collector of Surat did not fully carry out the instructions of the Commission, and there was no time to refer the matter after his reply was received. The information contained in the papers must now be accepted as the best the Commission could obtain under the circumstances. Six of the nine cases have been rejected—

Case No. 1—(Shariz Hamid Gul).—The Collector of Surat has forwarded the report of a Chief Constable. This is no doubt at least more authoritative than the original police papers. It may therefore be accepted as containing the best information available. If so, then there is not reasonable ground for attributing the insanity to ganja. The man who has been sane some time denies the use of the drug; and the Chief Constable only speaks of occasional use and attributes the insanity to quite another cause.

Case No. 2—(Chhotu Singh).—The "constant headache" preceding the insanity points to some other cause than ganja, and the evidence collected by the Magistrate of Broach disproves the ganja habit.

Case No. 3—(Mohandass Tulsidas).—Nothing more can be ascertained about this man in the further inquiry. The only reference to intoxicants in the papers is "This man does not seem to be given to any indulgence." It is impossible to say why this case was attributed to ganja. There is nothing in the Asylum Registers to show.

Case No. 4—(Mahomed Bhai).—In this case there is injury to the head, fever, and epilepsy; and the further inquiry disproves the ganja habit.

Case No. 7—(Gulab Khan).—The further inquiry shows that this man drank "spirits frequently to excess" and was given to excessive sexual indulgence. His use of ganja was only occasional.

Case No. 9—(Ashraf Chhitan).— The use of ganja and other intoxicants is clearly disproved. Religious excitement and insomnia seem to have been connected with his insanity.

There is one "mixed" case :—

Case No. 6—(Ravishankar).—There is in the further inquiry a clear history both of grief and of the ganja habit.

There are two cases which may be accepted as solely due to ganja :—

Case No. 5—(Jetha Manji).—The further inquiry confirms the view that ganja caused the insanity.

Case No. 8—(Raja Josa).—The use of liquor is disproved, and the ganja habit established, in the further inquiry.

The further report submitted by Surgeon-Major Lyons, Superintendent of the Ratnagiri Asylum, is very meagre and unsatisfactory. In this asylum five cases were attributed to hemp drugs in 1892. Of these, two must be rejected—

(4) Ratnagiri. (p. 171-174.)

Case No. 1—(Sidram bin Rama).—There is nothing to show why the Civil Surgeon of Belgaum now says that this man "smoked ganja for many years." He gives no explanation of his statement, and in that statement there is nothing to show that the man smoked before becoming insane "about ten years" ago. On the other hand the four months' fever that preceded his attack is a quite adequate cause of insanity.

Case No. 3—(Dinkar Gopal).—There is nothing in the papers to show that the use of ganja preceded the insanity, and there is no confirmation of the alleged ganja habit in the further inquiry. The young man has "naturally a somewhat imbecile appearance" and appears to be given to masturbation. The experience of the Commission does not lead them to concur with the Magistrate in thinking "that the information given in Form C may be presumed to be correct."

There is one "mixed" case—

Case No. 5—(Rama Pillai).—We have in the papers a history of fever, sun and liquor, as well as ganja.

There are two cases which may be attributed solely to hemp—

Case No. 2—(Gobind Wasadeo).—The previous papers show that this man was an excessive consumer of ganja. This may be accepted.

Case No. 4—(Nanachandra Dudhan).—This is a Thana case. It is the seventh case in the list submitted by Dr. Kartikar in his examination before the Commission (Bombay witness No. 73).

In the Dharwar Asylum one case was attributed to ganja in 1892. It was really (*vide* papers) a "mixed" case, with a history of both liquor and ganja. It may be accepted as a "mixed" case, as Dariappa's mother's story is very improbable.

(5) Dharwar. (p. 175—176.)

In the Hyderabad (Sind) Asylum there were thirteen cases set down to hemp drugs; of these, nine must be rejected—

(6) Hyderabad (Sind). (p. 177-195.)

Case No. 1—(Mulchand).—The inquiry in this case was not conducted in a fully satisfactory manner. Dr. Keith, Superintendent of the Asylum, recorded merely the impression created by an "inquiry made in the neighbourhood of the lunatic," without stating what witnesses were examined or what they said. It is impossible to receive this comparatively vague statement as against the clear statement of the lunatic's father. He speaks to one attack of insanity in Bombay, due to sunstroke; to the fact that thereafter Mulchand lived five years at home without his ever seeing him take narcotics; to his then being seized with sudden pain in his head and becoming insane; and to his falling into bad company after his recovery, and using hemp drugs and other intoxicants for five years more, when he again became insane (on the present occasion). Thus we have two attacks of insanity before the hemp drug habit was formed.

Case No. 2—(Lachhman Walji).—Here there is no history of the use of the drug apart from the admission of the lunatic himself, who is still insane and unable to give even the address of any of his relations. In his oral examination before the Commission, Dr. Keith, (Sind witness No. 16) said that he accepted "the statement of the insane after he had recovered his wits." In practice, however, he admits that he attaches weight to the statement of a man still insane; and the Commission cannot concur in this.

Case No. 3—(Parto).—This is a case of dementia. There is no history of the drugs; but Dr. Keith relies solely on the man's asking for liquor and drugs while still insane in the asylum.

Case No. 4—(Hiramon).—There is no evidence of the use of hemp in this case. The relapse in the asylum (where he got no hemp), is not conclusive as against the drug, but certainly must strengthen doubt. The statements now alleged to have been made by the lunatic in the asylum while still insane, and relied on by Dr. Keith, cannot be accepted.

Case No. 5—(Soba).—Here again there is no valid evidence of indulgence in hemp. The entry in the papers rests on Dr. Bainbridge's idea that there was "good symptomatic evidence of hemp intoxication" (*vide* Sind witness No. 34); and Dr. Keith relies entirely on the lunatic's statements while yet insane.

Case No. 6—(Metho).—In the further inquiry conducted by the Civil Surgeon and a Magistrate of Karachi, Metho's two brothers and a brother-in-law and his master were examined. All of them say that he never took ganja; two of them say that he occasionally took liquor. Yet Dr. Keith adheres to his ganja theory solely on the ground of alleged admissions made by the lunatic, although the lunatic has also made statements to the opposite effect.

Case No. 7—(Dholu).—The further inquiry conducted at Karachi led the Civil Surgeon there to decide most reasonably that there was no evidence that the insanity was due to hemp drugs; yet Dr. Keith adheres to his view on the ground of a statement alleged to have been made by the lunatic's father, though this man's evidence shows clearly that what he said must have been misunderstood. Dr. Keith nowhere says the statement was made to him. This is an interesting case as illustrating how very perfunctory the "examination of friends" at the asylum may be. This is quite in accordance with Dr. Keith's statement in his oral evidence as to the manner of his inquiries regarding the hemp habit.

Case No. 12—(Gulazim).—The insanity in this case occurred after the man had been in jail for a month under sentence as well as for the period under trial; and there is no satisfactory evidence of the use of hemp drugs. There is nothing but the insane man's statement in the jail.

Case No. 13—(Dulsingar Singh).—The man was insane to the last; yet Dr. Keith relies entirely on statements alleged to have been made by him in the asylum, but not recorded.

There is one "mixed" case—

Case No. 11—(Sevo).—The further inquiry gives a clear history of grief, opium and charas.

There are three cases which may be accepted as solely due to hemp drugs—

Case No 8.—(Matadin).—The further inquiry shows a history of ganja and charas. The man himself attributes his insanity to these drugs.

Case No. 9—(Shikro).—This is a somewhat doubtful case, for the use of bhang was apparently moderate. But as no other cause is indicated, it is accepted.

Case No. 10—(Baxali).—Dr. Keith's summary of this case is strangely inaccurate. The man distinctly says that he did not take charas every day, and he distinctly attributes his insanity to bhang and not to charas. However, there is a clear history of the drug and the case is accepted.

It may be noted here that Dr. Keith has used in three cases (those of Mulchand, Dhola and Baxali) the phrase, "the man seems under the influence of some narcotic." In his oral evidence he explains this to mean that the man was in "the drowsy, sleepy, wandering state of intoxication—a state of inco-ordination of the physical functions." No description could well be more unlike the symptoms recorded in these cases at the time. The type in two of the cases is shown as "mania," with a description of symptoms in accordance therewith; and the symptoms in the third case are thus recorded: "The man

talks incoherently, is very noisy, abuses every one, tears his clothes, runs about naked, sings and laughs without cause, and in a moment cries without reason."

This does not seem like a "drowsy, sleepy state."

If would appear from a careful examination of the record made at the time in these cases that "talking incoherently" was all that was required to make a man seem "under the influence of some narcotic."

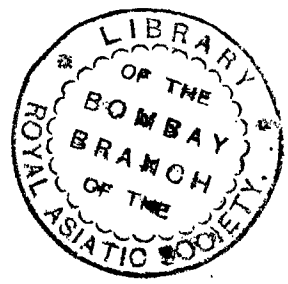
VIII.—Burma.—All may be accepted; one is a mixed case.

Rangoon. (p. 196-197.) In the Rangoon Asylum three cases were set down to hemp drugs in 1892.

Case No. 3—(Narada).—The papers indicate heredity as well as the use of bhang. The man had a brother who was insane.

Two seem due solely to hemp drugs :—

Case No. 1—(Zinulabdin).
Case No. 2—(Jung Bahadur). } —In both these cases there are only the previous papers to assist in coming to a decision. But these bear the marks of careful preparation, and the views they contain seem reasonable. They are therefore accepted, as it is impossible to obtain further information.


LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY.

COMMISSION'S ENQUIRIES AND THE REPORT ON THE FURTHER ENQUIRIES SUBMITTED THROUGH THE SUPERINTENDENTS OF ASYLUMS TO THE COMMISSION.

DALLUNDA LUNATIC ASYLUM (CALCUTTA).

(SUPERINTENDENT, DR. WALSH.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII).	Type of insanity. (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
1. Matabadal Goalla; Hindu; Servant; Calcutta; 30; XXV, 26.	Ganja	Melancholia.	Bad ...	This man was accused of murdering a fellow-servant. The Police Surgeon certified that he talked incoherently and had a delusion that a High Court Judge wanted to kill him. He several times became very violent the day after the murder. The type as shown by Police Surgeon is "Monomania of a homicidal type." Form No. 3 shows— 6. "For the past year he has been called insane by his fellow-servants. Has been subject to sudden fits of passion." 11. "Addicted to ganja for one year." 12. "Cause of insanity unknown." Admitted, 23rd January 1892.	Dr. Walsh, who was then medical officer at the jail, thinks that this man was a man of melancholy habit. He was under trial and quite sane until he saw that he had no chance of getting off the charge. He then became melancholic. This was not due to ganja. He has been here since 23rd January 1892, showing no signs of improvement. He denied the murder in the jail, attributing it to another, but now he tells no story. He seems to have forgotten the facts. This is one of the cases shown in Statement VII under ganja, but in Statement VI under "Melancholia" and not under "Toxic Insanity."
2. Rudra Narain Bhattacharjee; Brahman; Beadmaker; Midnapur; 36; XXV, 68.	Ganja	Melancholia.	Good...	Admitted, 25th April 1892. No medical certificate. Form 3 shows that "since his marriage he has been walking here and there for about 13 years. He was arrested by the villagers for setting fire to 3 or 4 houses and brought to the police." Form No. 3 shows— 11. "Addicted to ganja." 12 "Cause, smoking of ganja." Admitted, 25th April 1892.	When he came in in April 1892 he was comparatively sane and more or less coherent. He has been getting worse ever since. He has not therefore signs of ganja. It is clearly not a ganja case, though he may have taken ganja to give him Dutch courage. He has shown signs of Pyro-mania since he came in. This is a second case of difference between Statements VI and VII.
3. Uttam Singh; Hindu; Sepoy; 24-Parganas; 20; XXV, 115.	Bhang	Toxic mania.	Good...	Admitted, July 1892. He committed mischief by cutting the telephonic wires; was reported sane in January 1893, but "subject to relapses." He was formerly a sepoy in the Burma Police. Six months ago he was dismissed, and turned mendicant and lived with other mendicants. Form No. 3 shows— 11. "Previously he was addicted to bhang." 12. "Cause of insanity not known." Admitted, 14th July 1892. Discharged, 31st January 1893.	It is distinctly against this being a bhang case that when the man came in in July the then Superintendent wrote: "I can see nothing in his actions or manner indicative of insanity"; he was more sane than he was in August. He had "a relapse" on 8th August. His asylum history points rather perhaps to recurrent mania than bhang; but Dr. Walsh had not seen him. It is probably put down to bhang for want of other cause.
4. Shama Charan Kar; Hindu; Shopkeeper; Hooghly; 27; XXV, 118.	Ganja	Toxic mania.	Good...	The lunatic set fire to his brother's house. He was sent to jail on 23rd January 1892 and to the asylum on 24th July 1892. He was sane when admitted, and was made over to his friends on 31st March 1893.	The then Superintendent wrote: "Nothing suggestive of insanity about this man." This man never showed signs of insanity at all. It may have been ganja excitement; but he had been six months in jail and was quite sane when he came to the asylum.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII).	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
4. Shama Charan Kar —*contd.*	Ganja.	Toxic mania.	Good...	Form No. 3 shows— 11. "The lunatic has been previously addicted to ganja." 12. "Cause of insanity not known."	The Superintendent of the Jail puts "cause unknown"; he says facts observed indicative of insanity "*nil*," and there is nothing to show why bhang was assigned as the cause.
5. Ramlall Goalla; Hindu; Carter; Calcutta; 28; XXV, 120.	Ganja.	Toxic mania.	Good...	Was accused of theft. Police Surgeon certified that he "talks incoherently and incessantly. Is abusive, and does not sleep at night," 25th July 1892. Form No. 3 shows— 11. "Is a ganja-smoker." 12. Cause of insanity, "loss of property."	This has not the appearance in its asylum history of a ganja case; but there was no property to lose, and the then Superintendent took the most probable thing he saw; the man said he took ganja. The asylum history shows outbreaks and practically no improvement for this last year. If ganja has any connection with the case it is only an exciting cause in a man predisposed to insanity.
6. Guru Parshad Karmokar; Hindu; Goldsmith; Calcutta; 30; XXV, 122.	Ganja.	Toxic mania.	Fair...	Admitted, 11th August 1892. "Sane since then. He was charged with causing hurt with a dangerous weapon. He was breaking gas lamps on 24th July 1892, and struck those who interfered with a lathi, stabbing also with a file." Form No. 3 shows— 11. "Smokes ganja." 12. "Having been addicted to smoke ganja, turned mad."	We examined this man at the asylum on 14th August 1893. He answered quite coherently, and the Superintendent regards him as sane. He said "I have smoked ganja for seven years. I have never taken bhang. I used my ganja with tobacco only, and never mixed any other drug. Sometimes it was prepared for me by others; usually I prepared it myself. I bought the ganja flowers and mixed them with water for use. Smoking made me intoxicated, but never so as to prevent my working. The intoxication was immediate. It would last 1½ hours. I smoked twice a day. I took a pice worth at each smoke. I was not under the influence of ganja when I committed my offence. I had not smoked for three hours before. God made me mad, not ganja." This man seems a case of toxic mania. He has been quite sane since August (about ten days after admission). On admission he seemed sane, but remembered "a fit of insanity some two years ago, probably purely toxic, from ganja, which he smokes habitually." In his written statement given in to-day he says he also ate bhang. He also seems to have taken more ganja than he admits. This was the most reasonable (the only apparent) cause of his temporary insanity.
7. Mihir Lall Dey; Teli; Beggar; Hooghly; 22; XXV, 149.	Ganja.	Toxic melancholia.	Fair ...	This man was in the Hooghly Jail for theft; sent there on 26th May 1892, and certified insane on 7th July 1892 for "general vacancy of appearance, uncleanliness in habits, destruction of property, occasional silent and muttering fits, and boisterous incoherency." Form No. 3 shows— 11. "The lunatic was addicted to ganja and wine." 12. "Ascribed by police to ganja-smoking and drunkenness, more probably congenital."	He is entered in the register as "Toxic melancholia, ganja and wine." He died of cholera on 4th January 1893. His *post-mortem* showed no brain disease whatever. It looks like a toxic case, but whether "ganja" or "wine" it is impossible to say.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII).	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiry from Superintendent.
8. Nafir Chandra Dey; Hindu; Brazier; 24-Parganas; 27; XXV, 174.	Ganja.	Toxic mania.	Fair ...	"The accused was arrested for being drunk and disorderly, instead of which he appears to have been suffering from effects of ganja-smoking". (Form No. 3, Question 19). He was charged with causing hurt to a constable. Form No. 3 shows— 10. "Younger sister and cousin insane." 11. "Addicted to ganja and liquor from his boyhood." 12. "Cause not known."	He was admitted in November 1892 and discharged 25th January 1893. He was practically sane on admission. He had gonorrhœa, and admitted ganja and liquor. He ascribes his attack on the police to *ill-feeling*; the police ascribe it to ganja. The case is very temporary, and cannot certainly be regarded as a case of insanity; it is either temporary mania or excitement due to ganja or liquor. The man has a debauched history.
9. Ramkissen Panda; Hindu; 24-Parganas; 24; XXV, 83.	Ganja.	Toxic insanity.	Fair ...	"He has a wild expression, extremely restless, both mentally and physically, and is constantly talking in an incoherent and meaningless manner. Is evidently under some delusions, and suffers from paroxysmal maniacal excitement. Is a dangerous maniac." (Civil Surgeon, 4th June 1892.) Admitted 8th June 1892. Reported sane on 10th November 1892. Discharged 19th April 1893. Form No. 4 shows— 6. "At about the age of 10 he left his village and began to wander. When he was at Basirhaut he became mad; thence he came wandering to Dum-Dum." 10. "He is addicted to ganja and siddhi." 11. "The cause is not known. It is gathered from his statement he had a kept woman, since whose death he lost his reason."	The cause was probably debauchery. He had a debauched history. The temporary mania (for it was only temporary) may have been due to grief, but at least an equally probable cause was debauch or the means taken for drowning grief. The entry of Form 4 (No. 11) was not copied into the register through oversight.
10. Lallji Das; Hindu; Beggar; Howrah; 35; XXV, 84.	Ganja.	Toxic mania.	Fair ...	Civil Surgeon on 4th June 1892 certified: "Incoherent, noisy, violent, abusive, sleepless, maniacal." This man had been imprisoned on 14th January 1884, for house tresspass by night, and sent to the asylum on 27th March 1884, and made over to friends on 26th December 1887. He was again arrested for throwing a stone at a gas lamp on 20th March 1888 and sent up then as a criminal lunatic. He was made over to his brother on 22nd November 1888. He was again in the asylum from 20th May 1890 to 27th January 1891. He was again admitted to the asylum on 9th June 1892, and declared sane on 6th February 1893. Descriptive roll sent with Superintendent's letter of that date to Magistrate, Howrah, not now in the file.	Admitted 27th March 1884. Cause "ganja." Had been violent in Jail. February 9th, 1885: "Quite sane." This entry continues till he had a relapse on 9th May 1885: "Maniacal and refractory." On January 8th, 1886, he is again coherent and rational. On 6th October 1886 he again becomes "restless, noisy, and incoherent," and more or less insane up to August 1887. He was released on 26th December 1887. He came in again on 20th March 1888, and was sane in May. He continued sane until discharged on 22nd November 1888. He came in again on 20th May 1890: "mania, cause unknown, query fever?" from Berhampore. On 17th December he was certified sane, and made over to the Court on 27th January 1891.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiry from Superintendent.
Lalji Das—*contd.*	Ganja	Toxic mania.	Fair ...	.....	He returned again on 9th June 1892 and is insane up to date. He seems to be passing into dementia from frequent attacks of mania. This is clearly a case of recurrent mania. There are five known instances of relapse in his case. Cause unknown, possibly excited by ganja or other intoxicant. But his two relapses in the asylum in 1884-87 were certainly not due to ganja, but to some other cause.
11. Mongla *alias* Mahomed Syad; Musalman; Calcutta; 45; XXV, 90.	Ganja	Toxic mania.	Bad ...	He was apprehended for assaulting a passer-by in Bow Bazar Street. He had escaped from his brother's custody. His brother supported him. The brother is a respectable Burmese broker. The lunatic was admitted 22nd June 1892 and died 22nd August 1892 of dysentery and exhaustion. Medical certificate of 20th June 1892 says: "At times he talks incoherently and has delusions". Had committed some assaults. "Has the delusion that he is the king of Burma." Form No. 4 shows— 8. "Insane for 4 months." 9. "No relative insane." 10. "Addicted to opium and ganja." 11. Cause: "Excessive smoking of ganja."	The man was in very bad health. He died two months after admission. His insanity may have been due to a complication of causes. It may have been ganja. He was not only addicted to ganja, but also to opium. His bad health may have led to the development of toxic mania from his use of these drugs.
12. Balak Chutar; Hindu; no occupation; Hooghly; 30; XXV, 119.	Ganja	Toxic mania.	Good...	Medical Officer, Hooghly Jail, says: "Typical facial expression of amentia. He cannot answer questions with regard to his history and relations with any correctness, and becomes excited and incoherent on being so questioned. Has delusions, especially with regard to his arrest by the police. Since being in the jail he has been of a morose and generally silent disposition, at times breaking out into attacks of excitement accompanied by incoherent mutterings." * * "Likely to become dangerous," 11th July 1892. Admitted to asylum on 26th July 1892 and certified: "Sufficiently recovered to be made over to friends" on 1st March 1893. Relatives not traced. Form No. 4 says— 10. "The lunatic has been previously addicted to ganja." 11. Cause: "Probably ganja-smoking."	This man has never been dangerous in the asylum. There must have been some exciting cause at the time of the outbreak in the Jail. He has been quiet since. He is fit to be made over to his friends because not violent. But he is still demented though a little improved. He is a demented person: his temporary outbreak of mania in the Jail may have been "probably ganja-smoking"; but that is certainly not the cause of his dementia.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiry from Superintendent.
13. Fatteh Ram Singh; Hindu; Constable; 24-Parganas; 30; XXV, 124.	Ganja	Toxic mania.	Good...	Civil Surgeon certified, 13th August 1892: "Keeps himself naked. Is very filthy in his habits. Cannot answer questions rationally. Talks incoherently. Sings and makes noise at times. Does not sleep well." Admitted, 20th August 1892; made over to friends, 3rd December 1892: "Improved." Form No. 4 shows— 10. "Formerly addicted to ganja." 11. "Cause not known."	He was made over to his friends on their application because not dangerous. There has been a mistake in copying "ganja" as the cause, and this may have led to classification. The history does not show what the cause was. He came in, however, in a paroxysm of excitement, which passed off, and may have been due to ganja.
14. Hari Mohan Chatterji; Hindu; no occupation; Calcutta; 23; XXV, 125.	Ganja	Mania ...	Indifferent.	Presidency Surgeon (R. L. Dutt) on 25th August 1892 says: "Talking and laughing to himself in a stupid manner; delusions. Constantly moving his hands and playing with his clothes. His father states that his son is constantly smoking ganja and drinking wine, brandy, and bhang; that he tears his clothes, destroys his bedding, and is very noisy at night." Admitted, 26th August 1892. Made over to brother, 8th May 1893 (father having died). Form No. 4 shows— 10. "Addicted to ganja and ardent spirits." 11. "Smoking ganja."	This man was made over to his friends as harmless, but not cured. He had been 18 months insane before admission. He was apparently a weak-minded man before, but it seemed clearly a case of "toxic mania" as far as the immediate symptoms were concerned. But whether these were due to liquor or ganja cannot be said. This is the third case of difference between Statements VI and VII.
15. Chotu *alias* Motee; Musalman; Coolie; Calcutta; 20; XXV, 128.	Ganja	Toxic mania.	Bad ...	Police Surgeon wrote, 31st August 1892: "Was admitted into the Campbell Hospital on 2nd instant suffering from diarrhœa. On recovery showed signs of insanity; at present talks incoherently. At times becomes violent; tears down the plaster of his ward, and throws it at other patients." Admitted into asylum, 1st September 1892. Made over to brother, 8th February 1893. Form No. 4 shows— 10. "Ganja." 11. Cause: "Owing to excessive ganja-smoking."	Was fairly sane in January 1893. The delirium of toxic insanity is often developed by a severe illness or an accident (*e.g.*, delirium tremens, from an attack of pneumonia or an accident to drayman). This man's insanity was entirely removed. He was "sane and fit for discharge" in January. He went up from 77lbs. on admission to 96lbs. This seems probably a case of temporary insanity from the remote effects of drugs.
16. Nizamuddin; Musalman; Havildar; Burma; XXV, 180.	Bhang	Sane since admission.	Good...	This man was sent over from Burma by Officer Commanding 31st (6th Burma Battalion) Madras Light Infantry. He was discharged from the Army on 26th October 1892 as "found insane" after 6 years and 184 days' service. "*Statement of case*" by Regimental Surgeon, 7th September 1892, runs thus: "He was admitted on 7th September in a semi-delirious state. He was very excited, and had apparently lost all control over	"Depressed but quite coherent" when admitted. He was sane on admission, and attributed his insanity to sunstroke. He had been over 7 years sane and 6½ years in a regiment. He may have taken ganja or bhang for certain purposes, and it may have injured him. He would naturally deny it as a respectable man. His insanity was quite temporary, and he was useful in the asylum and a pleasant and respectful man.

Hemp drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiry from Superintendent.
Nizamuddin—*contd.*	Bhang	Sane since admission.	Good...	himself. He was supposed to be under the influence of bhang,* and was admitted for toxic insanity. He quieted down under treatment, but seemed vacant and depressed. On the morning of the 10th he became violent, and struck one of the hospital servants on the face, and injured him somewhat severely. This was entirely unprovoked and apparently unpremeditated. Again, on the 20th, he managed to evade his attendants during the night and steal a wood chopper and rushed into the Subadar-Major's quarters and struck a sepoy who was near there with the chopper. The next morning he was very sullen and peculiar in his manner; would not answer questions, and wandered aimlessly about wherever he was allowed to go. He was "Discharged Otherwise" and readmitted for mania and a Board was applied for. He has not been under observation for a month; but it seemed advisable to get his case settled and have him sent somewhere where he could be properly looked after. He is said to be a very abstemious man, and to have been disturbed by finding he had forgotten to observe certain ablutions before reading the Koran, and to have got the idea that nothing but his becoming a father would free him from his guilt. He has been quite quiet lately, and seems sane in his intervals. He was discharged from his last place in the Port Blair Police for insanity." The Port Blair certificate of Surgeon-Major Keefer, dated 6th October 1885, says: "He was admitted to hospital on 26th August 1885 in an excited state; eyes congested and pupils dilated. He was restless and aimless, and had refused food at times. The disease appears to be of a temporary nature, and to have been induced by smoking ganja. He is not violent, but is an unsafe man to be entrusted with fire-arms or kept on in the police force." He was discharged "cured" with a railway warrant to Gujrat on 22nd January 1893.	This is the fourth case of difference between Statements VI and VII.
17. Poran Patro; Hindu; Cultivator; Howrah; 30 or 32; XXV, 191.	Ganja	Toxic mania.	Bad ...	Civil Surgeon, 13th November 1892, says:—"Incoherent, maniacal, dangerous to himself and others, restless, sleepless, very filthy. Very turbulent and aggressive; threw an empty bottle at a prisoner's head in the Sub-Jail." Admitted, 16th November 1892. Discharged "cured," 23rd March 1893. Form No. 4 shows—	The register shows this case as "hereditary and ganja." But the "cause" is taken from the fact that he would not answer until ganja was offered him; then he grinned all over face at the word. Then he improved rapidly. He was admitted on 16th November 1892, "very violent and destructive, sleepless, eyes bloodshot, scratches, etc., due to struggling." He was treated with sedatives. On December 7th "improved mentally." January 7th, "clean, much improved mentally and bodily." On February 9th

* "Supposed to have been smoking bhang."—(Lunacy certificate.)

Hemp drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
Poran Patro—*contd.* ...	...	...	...	9. "His father, Bissambhar Patro, was a lunatic." 10. "Smokes ganja." 11. "Cause not known."	"sane," and discharged cured on 22nd March. His rapid and perfect recovery points to toxic mania. The ganja, no doubt, affected him owing to his hereditary tendency. Ganja was the exciting cause in a person predisposed. The predisposing cause was hereditary taint.
18. Mahadeo Chamar; Hindu; Syce; Calcutta; 35; XXV, 234.	Ganja	Toxic mania.	Good...	Police Surgeon, 24th December 1892, says :—"Talks incoherently and is very violent. Demands ganja. At times is very abusive. Attempted to strike the Assistant Surgeon of the 2nd Medical Ward on the 23rd December 1892 without provocation. On the 23rd December 1892 attempted to hang himself to his ward iron-grated door." Was arrested by the police wandering about the public roads. Admitted, 26th December 1892. Discharged cured, 19th January 1893. Form No. 4 shows— 10. "Is addicted to ganja." 11. "Cause unknown."	This was a case of temporary intoxication. He was quiet on admission. He had been in Campbell Hospital. He had no insanity when admitted on 26th December. On 27th December he "seems quite rational, quiet since admission, slept well, clean." It was an outburst of anger or temporary intoxication. It was taken as the latter because of his ganja history.

NOTE.—The total number of admissions in 1892 was—

Criminal	Males...		21
	Females		4
Non-criminal	Males		30
	Females		9
		TOTAL ...	64

Of these, the above eighteen cases were attributed in Statement VII to hemp drugs.

Report on the further inquiry into the Hemp Drug cases of 1892 for the Dallunda Asylum.

1. MATABADAL GOALA.

(Melancholia.)

Hindu, aged 30 years. Admitted into the Dallunda Lunatic Asylum on the 23rd January 1892. At the time of admission was in bad physical health and suffering from fever (probably malarial—temperature on admission 100·2° F. soon passed off). His state of mind before his arrest is not very clearly described, but in his *Descriptive Roll* it is noted that "for the past year he has been called 'thucker,' or insane, by his fellow-servants, has been subject to sudden fits of passion." It is further stated that he had been addicted to the use of ganja for one year previous to the commission of the crime for which he was arrested. On the night of the 6th January 1892 he attacked Kurrim Singh, a fellow-servant, with a knife, killed him, and then wounded two other men. From the 6th to the 22nd January he was confined in jail. I saw him on his admission to the Presidency Jail, and he was then sane and quiet; he became depressed and melancholy and was certified as insane and unfit to stand his trial. He was never excited while in the Jail, and the opinion given by the Police Surgeon on the 15th January that "he is a mono-maniac of a homicidal type" was founded on his outburst on the night of the 6th January. That outburst of passion I regard as one of those periods of excitement which occur at one time or another in most cases of melancholia. Ganja was not accepted by the Police Surgeon or by the Chief Presidency Magistrate as the cause of Matabadal Goala's insanity, and the cause was said to be unknown. On admission to the Dallunda Asylum he had certain delusions, believing that Justice Chunder Madhub Ghose wished him to be killed; he denied all knowledge of the crime of which he was accused. He was always quiet and much depressed during 1892; incoherent, but ate and slept well. He worked at the oil-mill and in the garden, and was never regarded as a dangerous lunatic. In February 1893 he was slightly excited for two days (22nd to 24th) and refused to work; he did not attempt any act of violence. Since July 1893 he has been more cheerful and more rational, answering questions and asking to be sent for trial. This month he will be brought before the visitors, and if found sufficiently sane will be sent before the Magistrate.

I am of opinion that this man was always of weak mind and probably of melancholic habit. This neurotic tendency may have been increased and made manifest by the use of an intoxicating drug such as ganja, but this drug must be regarded as an *exciting cause* and not as the prime cause of Matabadal Goala's insanity. The main reason for not regarding this as a pure case of ganja insanity is the length of time it has lasted and the continuous depressed condition long after the period during which he is said to have used ganja—a drug the effects of which I think pass off rapidly.

J. H. T. W.

January 19th, 1894.

---

2. RUDRA NARAYAN BHATTACHARJEE.

(1, Melancholia; 2, Dementia; 9th September, 1893.)

The previous history of this man is given in the following extracts from a letter written by Mr. A. M. Mackertich, Deputy Magistrate of Midnapore:—"Rudra Narayan Bhattacharjee's history is rather interesting and not without adventure. He was born in the village of Ujan, conterminous with Akna, where he lived from his infancy for eight years. At this age his father died, and as he had transferred all his land by sale during his lifetime, his widow was left without any means of livelihood. She therefore thought it prudent to move into Bhagidandapur Kedar, her parentage, with her hopeful.

(3) Here they lived for a short time; then the mother died. Rudra Narayan Bhattacharjee attracted the attention of his uncle Ram Tarok Siromoni, who became his guardian. I may add here that before Rudra Narayan left his native land he had received rudimentary education in Akna.

(4) Ram Tarok Siromoni kept him for a time and eventually brought his nephew to Shamchandpur in the house of a *Goala*, where his services were engaged as the family priest. He lived here for a short time and came into the town of Midnapur, earning a livelihood by doing *Kalipuja* wherever he was wanted.

(5) His uncle took him back when he was about 20 and married him to an infant girl 3 years old. It was settled that Rudra Narayan Bhattacharjee would live in the house of the bride as a *ghor-jamai*, but being for some years with *Goala* the vocation selected by his uncle did not suit the young man: he returned to the *Goala* and resumed his former duties. In this capacity he invariably went to Calcutta and back carrying merchandize, *ghi* and *dohi*. He tried to be independent and set up for himself a shop in Calcutta selling necklaces, etc., but finding it unprofitable he suddenly appeared in Bhagidandapur in his uncle's house and lived for a few days.

(6) Finding an opportunity he robbed his uncle of about Rs. 200 in cash and ran away. He was, however, detected by a Police Sub-Inspector near Salboni while paying Rs. 18 to the cartman he had engaged to carry him from Midnapur to Chandra. The Sub-Inspector, seeing this large payment, suspected foul play, took him into custody, and found Rs. 150 in cash on his person. He was sent up for trial, but in Midnapur he was let off on bail. One Mukhter Hari Mohun Mullick stood security for him and kept him in his house in a room. At night he escaped through a window and was not heard of for five or seven years, then all of a sudden he appeared in Akna as a full-grown *sanyasi*. He had his body covered over with ashes, wore a beard, and took up his abode in a small scrub jungle between the two villages Akna and Ujan. It is rather a secluded spot, yet in the vicinity of the above villages appertaining to the latter.

(7) His identity was soon known in the village and people began to be charitable to him. At first he refused to eat cooked food, but this wore out in time. He was put out considerably when sufficient pice could not be subscribed in the village for his ganja (some say that he used to smoke about ten to twelve pipes of ganja daily, while others reduce it to three).

(8) During his stay in Akna his wife and mother-in-law came to him, but he refused to see them. It is reported by the villagers that he invariably turned away his eyes from females. Immediately after the arrival of his wife and mother he gave out that he was going to a pilgrimage to *Setbundo Rameswar* (South India), but returned shortly and gave out that he was unsuccessful in his adventure as he dreamt of his wife.

On this occasion he asked the villagers to bring his wife, but she could not be sent for, as a wave of fever was going over the village and some cases had been fatal. She could not be sent for for a fortnight. This interval Rudra Narayan Bhattacharjee spent in finding out the plots of land once held by his father. Through the persuasion of one Ayoddhya Chakrabutty he wrote out a deed of sale of a certain plot to Ayoddhya Chakrabutty, which had been previously transferred by his father to one Muchiram Bhuttacharjee. When the new purchaser with Rudra Narayan came to take possession they were defeated, and on this night he set fire to about six houses, Muchiram's being one of the six.

After his arrest he represented that it had escaped him to close the doors from outside and set fire, as his object was to burn and kill the inmates who had opposed him in obtaining possession of his lands.

Before this he picked a quarrel with one Narain Dinda Koybarta, who had taken a cultivation lease of an area of two kattas previously held by Rudra Narayan's father from the malik of the plot. On this occasion also he attempted to set fire to his house but was prevented and tied up in the house for the day.

The only incoherent speech made by Rudra Narayan during his career as a *sanyasi* was a crusade against the payment of water-rate. He preached to the people against such payment, saying that it was illegal, and the person who came to make such demand was to be brought up before him. He asked the people to build battlements, and he would undertake war against the Queen-Empress of India."

This history does not throw much light upon the origin of the man's insanity, but it shows him to have been of a wandering, restless, and unsettled disposition, and I have no doubt that the mischievous desire to set fire to things was the outcome of feebleness of mind. As a *sanyasi* (most of them degraded and filthy rascals) he probably further injured his mental faculties by frequent intoxications with ganja, but I do not regard this as a case of *ganja insanity* at all, although ganja is given as the cause in his *Descriptive Roll.*

Rudra Narayan Battacharjee, aged 32, was admitted into the Dallunda Lunatic Asylum on the 25th April 1892. His physical health was good. He had an uncertain expression and was depressed and melancholic; at times quite coherent but variable. Admitted that he set fire to a house to annoy his relatives. He did not improve, and in December 1892 he was "incoherent and silly, quiet, harmless, and clean." During 1892 he had been doing light work in the weaving shed, but one morning (January 11th, 1893), he was found trying to secrete some lighted paper, and it was thought wise to remove him from the weaving shed. During 1893 the type of his insanity changed and he became demented. He was classed as *dementia* in September 1893.

At the present time he is demented, quiet, and harmless.

January 19th, 1894. J. H. T. W.

---

3. UTTUM SINGH *alias* CHAIT SWAMI.

(Toxic Mania? Recurrent Mania?)

Very little is known of this man's previous history and no reason is given for his dismissal from the Burma Police six months previous to his arrest. After his dismissal, we may presume that he was sane for a period of five months, but he is said to have been insane for a month previous to his arrest. It is not stated what form his insanity at first assumed. On the 21st of May 1892 he was arrested on the Cossipur Road, a very public place, because he was cutting the telegraph wires. On the 23rd May when brought before the Magistrate he was incoherent, boisterous, and appeared dangerous. He was reported to have been addicted to the use of *ganja* and *bhang*, but no cause was assigned for his insanity. The fit of excitement had passed off by the 14th July, when he was admitted into the Dallunda Lunatic Asylum, and the Acting Superintendent wrote as follows:—"I can see nothing in this man's appearance or manner suggestive of insanity; says he became *pagal* temporarily, but is now all right." He continued quiet and sane up to the 8th August, when he was violent and aggressive. The excitement passed off towards the end of the month. When I first saw him on November 17th I wrote in the case book:—"Is improving, but silly and does not recognize the mischief that he did to the telegraph wires; quiet, clean, and harmless." In December he was sane and remained sane up to the 11th February 1893, when he was discharged cured to stand his trial. He did not return to the asylum, so probably continues sane.

I do not think that this was a case of *ganja insanity*, but one of recurrent mania, cause unknown. Ganja was, I suppose, accepted as a probable cause of the outbreak in May, but certainly had nothing to do with the attack on the 8th August 1892.

January 19th, 1894.

---

4. SHAMA CHARAN KOR.

(Toxic Mania.)

Hindu, aged about 27, probably more; physical health good; was admitted into the Dallunda Lunatic Asylum on the 24th of July 1892. The information which accompanied him was most meagre and, as I shall presently note, the descriptive roll was filled up in a most careless manner. The man was stated to have been addicted to ganja, but under the heading "Cause" (12) we find "not known" entered. The man set fire to his brother's house, and was arrested and brought before a Court. He was acquitted of "causing

mischief by fire" on the grounds of insanity. The evidence, medical or other, on which this acquittal was based was not communicated to the asylum officers, and no certificate of insanity accompanied him to the asylum.

On admission to the asylum the Superintendent wrote as follows:—"Nothing suggestive about the man's aspect or manner; he answers questions intelligently and with perfect composure." He remained sane, and in January 1893 I recommended that he should be released and made over to his friends. He was discharged cured on the 31st of March 1893. I will now review briefly the information subsequently obtained through the Magistrate of Howrah. Going back in this man's life history for a period of fourteen years, we find, on the evidence of his brother and other persons, that after smoking ganja, probably in excess, for one year, Shama Charan Kor became insane. He remained insane for three years, but as it was not necessary to confine him, we may fairly suppose that he suffered only from a mild form of dementia. He recovered, and his brother appears to have weaned him from the ganja habit. Shama Charan Kor remained sane for eight years, at the end of which period he again took to ganja-smoking, and again his intellect became clouded, so that for two years he remained insane. He appears to have had some feeling that his brother was acting unfairly towards him in not allowing him to marry, and this so preyed on his already disordered faculties that in an excess of irritation and spite he set fire to his brother's house. He was arrested and his supply of ganja cut off. This deprivation, aided perhaps by the shock of finding himself a prisoner, was followed by his recovering. He was arrested on the 11th November 1891, at which time he was, no doubt, insane; but between that time and the 24th of July 1892, when he was sent to Dallunda, he had recovered his sanity. There is no suggestion of hereditary taint in this case, and I think the brother's statements point clearly to the conclusion that in this case insanity resulted from the use of hemp drugs; it is to be regretted that we do not know exactly how much ganja was consumed. Possibly this is one of those cases in which a small amount of ganja, alcohol, or other stimulant will suffice to upset the nervous equilibrium. This is frequently a matter of individual idiosyncrasy. Shama Charan Kor, as will be seen from the accompanying notes and answers to questions, is now sane, and has ceased to use hemp drugs.

5. RAMLALL GOALA.

(1, Toxic Mania? 2, Chronic Mania.)

This man was a carter and supposed to be sane up to three months before his arrest. During those three months he appears to have been wandering about Calcutta; he was abusive and threatening in his manner. The cause of his insanity was unknown, but *as he was a ganja-smoker, I suppose ganja was accepted as a probable cause failing any other. The history of the case after his admission does not bear out this supposition, and he has now after a long period of observation been classed among those suffering from *chronic mania*. In his *Descriptive Roll* "loss of property" is given as a cause, but I have never been able to obtain evidence as to the possession of any property. His parents are said to have been free from insanity. He was arrested by the police in July 1892 on a charge of theft, but was found insane and incapable of making any defence.

Ramlall Goala, aged 28, was admitted into the Dallunda Asylum on the 3rd August 1892. At the time of his arrest he "behaved in an eccentric manner, danced about, abused people, tore his clothes, and jabbered incessantly."—(Report of Presidency Magistrate), The Police Surgeon who examined him recorded as follows:—"Talks incoherently and incessantly. Is very abusive, and abuses everybody around him without any cause; does not sleep at night; struck a prisoner in the Calcutta police lock-up." After his admission into the asylum it is recorded that his "appearance does not suggest insanity; converses calmly and rationally; admits he smoked a little ganja." On the 18th August he became very excited and has often been so since. He is never rational, abusive and threatening, but not dangerous. The last entry in 1893 is "variable, noisy, and abusive at times, but has never been actually violent or dangerous; unfit for discharge."

* *Note.*—No ground is given for this remark. It is apparently based solely on the asylum papers.

I consider this to be a case of recurrent mania which has now become continuous and chronic. I do not think that ganja had anything to do with this man's mental disease.

January 20th, 1894. J. H. T. W.

---

6. GURU PARSHAD KARMOKAR.

(Toxic Mania.)

Two years before admission to the asylum this man had a brief attack of mania, during which he struck his brother with a *lathi*. He was not confined in an asylum and seems to have recovered, although it appears that he was frequently intoxicated with ganja, which he smoked habitually. On the 24th July Guru Parshad was breaking gas lamps in Bunniatolla Street. Some people interfered to stop him, when he struck out with a *athi* and stabbed a man with a file. He was arrested and examined by the Police Surgeon, who reported as follows:—"Talks incoherently; has the delusion that he communicates direct with God in dreams; does not sleep at night."

He was not admitted into the Dallunda Asylum until the 11th August, 1892, and by that time the excitement seems to have passed off. He appeared about 30 years of age and was in fairly good physical health. On admission he was seen by Surgeon-Captain W. H. Pilgrim, who wrote in the case book:—"Nothing peculiar in aspect and talks quite coherently, but remembers that he had a fit of insanity some two years ago; probably purely toxic from ganja, which he smokes habitually."

After observing him for two or three months I had no doubt as to his perfect sanity, and he was sent to stand his trial on the 30th January 1893. He was acquitted on the grounds of insanity, and sent back to the asylum to undergo the usual probation as a criminal lunatic. He was perfectly sane on re-admission on the 18th February, and has remained sane ever since.

I regard this as a case of temporary insanity due to the abuse of hemp drugs.

January 20th, 1894. J. H. T. W.

---

7. MIHIR LAL DEY.

(Toxic Mania; ganja and wine.)

In addition to the notes of this case, which have already been sent to the Hemp Drugs Commission, the following information has been furnished by the Magistrate of Hooghly, who remarks that the information is practically valueless for the purpose of tracing any connection between the insanity of the subject and the use of hemp drugs, as the man was a wanderer from some other district. Mihir Lal Dey was sane previous to his arrest by the police on the 10th of May 1892. He was charged with stealing a basket of mangoes. When brought before the Magistrate he appeared to be insane and was kept under observation. He appears to have been brought up again on the 26th May, convicted, and sent to jail. While in jail it became evident that he was insane, and symptoms of mania were well marked. There is no evidence, other than the statement in his descriptive roll, that he was addicted to the abuse of ganja or wine, and even in the roll it is suggested that he had a hereditary tendency to insanity:—"12. Cause.—Ascribed by the police to ganja-smoking and drunkenness; more probably congenital." I have already stated that I think this man's insanity was due more to excess of alcohol than anything else, and the *post-mortem* appearances showed that he was suffering from an acute disease.

---

8. NAFIR CHANDRA DEY.

(Toxic Mania.)

In the *Descriptive Roll* which was sent with this lunatic to the asylum it is stated that he had previously suffered from an attack of insanty two years before. That attack

lasted five months. The attack for which he was admitted into the Dallunda Asylum in November 1892 had lasted six months, and was ascribed to "ganja and liquor from his boyhood." Further enquiries tend to confirm the belief that this was a case of "*toxic insanity.*" The Joint Magistrate of the 24-Pergannahs (January 1894) makes the following report:—"As regards the lunatic No. 8 I have ascertained by local enquiries, on the 24th ultimo and 2nd instant, that he is an inhabitant of Chitla, Thana Alipore, of this district, and that he used to smoke ganja worth a pice daily, and subsequently, having been associated with others, indulged himself freely in the vice, and was also addicted to excessive drinking." "The chief cause of his insanity was the excessive use of ganja, and in this view the Civil Surgeon of the district also concurs with me." He was arrested on the 13th September 1892 as drunk and disorderly; he was violent and struck a constable on the testicles with a stone. When brought before the Magistrate on the 14th he was restless and talkative. As he appeared insane he was remanded. He appeared before the Magistrate six times and was "more calm and not so talkative" during the later interviews. Under the orders of the local Government of Bengal Nafir Chandra Dey was admitted into Dallunda Asylum on the 5th November 1892. He was 27 years of age; in fair health, but suffering from gonorrhœa. The first note in the case book is as follows:—November 7th.—"Answers questions fairly, rationally, and says he threw some dirt at the policeman because he struck him on the neck." Seemed to have some delusions concerning money that had been stolen three years before, and thought the police had some spite against him. He improved rapidly while in the asylum, and was discharged cured on the 25th January 1893.

I learn (January 1894) that "he is still residing at Chitla with his father, appears perfectly sane, and works as a brazier."

This seems to have been a case of ganja intoxication, but the man was also addicted to spirit-drinking and other vices.

January 21st, 1894. J. H. T. W.

---

9. RAMKISSEN PANDA.

(Toxic Mania.)

Little is known of this man's previous history, and there is no means of knowing whether there was insanity in his family. The information given in the *Descriptive Roll* cannot be accepted as of any value if one is to judge from the answer given to question 8:—"How long has the lunatic been insane"? *Answer.*—"About a year *according to his own statement!*" The man was a panda and combined the duties of priest, no doubt with those of a pilgrim tout. He led a debauched life and was addicted to the use of both ganja and siddhi. This is stated in his *Descriptive Roll* and was admitted by the man himself after he had recovered his reason. The cause given for his insanity is grief at the loss of a mistress, but I regard this as improbable. I think this was a true case of *ganja-intoxication.* On the 4th June 1892 he was examined by Surgeon-Captain Harran at Dum-Dum, and this gentleman stated:—"The man has a wild expression. He is extremely restless, both mentally and physically, and is constantly talking in an incoherent and meaningless manner. He is evidently under some delusions, and suffers from paroxysmal maniacal excitement. He is a dangerous maniac."

Ramkissen Panda, aged 25, was admitted into the Dallunda Asylum on the 8th June 1892. His physical condition was fair. On admission he was noisy and sleepless, but most of the excitement above referred to had passed off. By August he had become much quieter, but was still incoherent. In September he improved considerably and wrote a letter to his friends; he was quiet and almost quite coherent. He continued to improve under medical treatment, and in January 1893 was quite sane. He was kept in the asylum under observation until April 19th. He remained sane and was discharged cured.

We have no proof that this man had shown any signs of insanity previous to the maniacal outburst at Dum-Dum. We know that he used ganja and siddhi largely, and

when removed from the influence of these drugs he recovered rapidly. Roughly speaking, the duration of his insanity was about six months.

January 19th, 1894. J. H. T. W.

---

10. LALLJI DAS.

(1. Toxic Mania; 2. Recurrent Mania.)

This was practically a re-admission, as the man had previously been admitted into the asylum on three occasions before 1892.

He was first admitted on the 27th March 1884. He was noisy, violent, and incoherent, and his attack of mania was ascribed to ganja. He recovered and was sane on the 9th February 1885. He continued sane until the 9th of May in that year, when he had a relapse and again became "maniacal and refractory." He had got over this relapse by January the 8th, 1886, and was again sane and coherent; there was a mild relapse in October 1886, when he was "restless, noisy, and incoherent," but not violent. He remained more or less insane until August 1887, when his mind again became clear. During the remainder of 1887 he continued sane, and in December of that year was discharged cured to the care of his friends. In March 1888 Lallji Das had an attack of mania and was arrested by the police for throwing stones at a gas-lamp. He was taken before the Magistrate, found to be insane, and sent to Dallunda. From this attack he quickly recovered, and was sane in May 1888. He continued sane and was discharged from the asylum on 22nd November 1888. He seems to have remained sane until 1890, but in May of that year he was again sent into the Dallunda Asylum with "mania, cause unknown, query fever?" He recovered by December 1890, and in January 1891 he was discharged to stand his trial for some trivial offence.

On the 30th May 1892 Lallji Das was found wandering in the streets of Howrah, beating upon doors, and throwing stones, abusive and incoherent. He was taken up by the police and sent to the Dallunda Asylum as a wandering lunatic. He was said to be addicted to the use of ganja, but under the heading "cause" was entered "Not known." In the asylum his mental condition improved as on former occasions, and he was quite sane when discharged from the asylum in December 1893. I am able to state that this man has, since that date, been employed as a paid carpenter in the asylum. He continues sane [April 24th, 1894] and works well. He lives outside the asylum with the head carpenter, and does not indulge in ganja smoking.

In this case ganja can only at the most be considered as a possible *exciting cause* in some of his attacks; but it cannot be connected in any way with the two relapses which occurred while Lallji Das was in the Dallunda Asylum between 1885 and 1888.

The evidence as to his use of hemp drugs is conflicting, but not, to my thinking, contradictory. Although both Jhansi Dass and Mangal say they had known Lallji Das for years, it does not necessarily follow that they both had him under observation—so to speak—at the same time. Jhansi Dass, too, says that he does not know where Lallji Das lived while in Howrah and while working for him, showing that his evidence as to Lallji Das's habits in private is not very valuable. Lallji Das, according to Mangal, was sane while working for him until a period at which he used to visit Jhansi Dass nearly every evening; at this period Mangal says Lallji took to using hemp drugs. Jhansi Dass has admitted that he was a ganja-smoker, and it is not unlikely that Lallji Das acquired the 'ganja habit' during those evening visits above referred to. The evidence of Ramtarak Kundee also leads me to conclude that Lallji Das would probably have remained sane had he not fallen into the evil company of Jhansi Dass. There does not seem to be any hereditary taint in this case, but I consider Lallji, like thousands of other ignorant persons, to be unstable as regards his mental condition; he might be thrown from his mental balance by hemp drugs, but other exciting causes would have the same effect.

11. MONGLA *alias* MOHAMED SYAD.

(Toxic Mania.)

This man was arrested in Bow Bazar Street on the 7th June 1892. He was excited, boisterous, talking incoherently, and assaulting persons passing along the road. In his *Descriptive Roll* the cause of his insanity is said to have been the use of chandu and ganja, to which he had been addicted for five or six years. The period of insanity previous to the outburst which led to his arrest is stated to have been four months. Ganja was accepted as the cause of Mongla's insanity on the history of his previous habits as reported by his brother and on the medical certificate given by the Police Surgeon. He was first taken to the Campbell Hospital and placed under the care of the Police Surgeon. In this gentleman's certificate occur the following notes :—"At times talks incoherently and has delusions, at time strikes those around him without provocation." He thought he was the king of Burma.

Mongla, aged 45, was admitted into the Dallunda Asylum on the 22nd of June 1892. He was in bad physical health, and the first note I made on his condition was as follows :—"Says he has gone mad through magic; speaks thickly and with a tremulous hesitation; eats and sleeps well." He was fairly quiet up to the 15th July, when he became excited and aggressive, but the excitement passed off in about 24 hours. On the 28th July he was admitted to hospital suffering from dysentery, of which he died on the 22nd August. It is difficult to say exactly how much this case was the result of ganja. It seems to have been a case of *ganja intoxication* in a man in extremely bad physical health. The amount used might possibly not have had such a serious effect on Mongla, had he been in good health.

January 19th, 1894. J. H. T. W.

---

12. BALAK CHUTAR.

(1. Toxic Mania; 2. Dementia.)

Concerning this man no further information of value has been obtained. He was found wandering about in a village, Cawnpore, in the Hooghly district, of which he is not a native; found to be insane and sent to the Dallunda Lunatic Asylum. In his descriptive roll we find the following remarks :—"11. The lunatic has been previously addicted to ganja." "12. Cause.—Probably ganja-smoking." The medical certificate which accompanied Balak Chutar to the asylum contains the following remarks :—"Typical facial expression of amentia. He cannot answer questions with regard to his history and relatives with any correctness, and becomes excited and incoherent on being so questioned: has delusions, especially with regard to his arrest by the police."

"Since being in jail [under observation only, not as a criminal] he has been of a morose and generally silent disposition. At times breaking out into attacks of excitement accompanied by incoherent mutterings. On being spoken to or asked questions he becomes irritated."

Balak Chutar, Hindu, aged about 30 years, in fairly good physical health, was admitted into the Dallunda Asylum on the 26th July 1892. He was incoherent, shifty, and uncertain, clean and quiet. Since he has been in the asylum he has improved a little, and the last note about him is—"April 5th, 1894: Seems to be still improving, tries to answer questions as to the locality of his home; cannot give his father's name. Demented."

The type of his insanity has been changed to 'dementia' in place of the original diagnosis (on insufficient information?) of 'toxic mania.'

I cannot think that this man's insanity was in any way caused by hemp drugs. It appears to me to be the result of imperfect 'development.'

---

13. FATTEH RAM SINGH.

(Toxic Mania.)

The *Descriptive Roll* sent with this man to Dallunda does not contain any information of value, and the following facts are taken from answers to questions which I

submitted to the Magistrate of the 24-Pergannahs, Alipur. The man was reported to have been insane for five months previous to his arrest, and his relatives state that he had been addicted to the use of ganja for one year previous to his becoming insane. He was arrested on the 26th July 1892 at Porabazar, Bhawanipur, because he threw himself across the tram-lines. He was violent at that time. He was placed under observation, and on the 13th August the Civil Surgeon of the 24-Pergannahs certified as to his insanity:—"Keeps himself naked; is very filthy in his habits; cannot answer questions rationally."

Fatteh Ram Singh, aged 30, was admitted into the Dallunda Asylum on the 20th August 1892. He was in good physical health. He was excited, violent, and dirty. He improved under treatment with sulphonal, and in November I made the following note on his condition:—"Cleaner and sleeps better, but still quite incoherent; inclined to throw off his clothes." He improved still further, and all the excitement, at first present, passed off. His friends being willing to take charge of him, he was discharged improved to their care on the 3rd December 1892. I have since learnt that he is living in his native village, Andherwana, in the Mozufferpur district, and that he is still insane and dirty, but not violent.

It is not possible to say whether this man's insanity was due to ganja in the first place, but there is, I think, no doubt that ganja acted upon him injuriously, and was the exciting cause of the violent paroxysm which occured in July 1892. I am not informed as to whether he still uses hemp drugs in any fom.

January 21st, 1894. J. H. T. W.

---

14. HARI MOHAN CHATTERJI.

(Toxic Mania ?)

This man was the son of well-educated people and was a private patient in the Dallunda Asylum. His relatives reported that he had only been insane for 18 months, and they found it necessary to send him to an asylum to break him off his bad habits and because he was destructive and noisy at night. His father stated (certificate) that "his son Hari Mohan Chatterji is constantly smoking ganja and drinking wine, brandy, and bhang; that he tears his clothes and destroys his bedding, and is very noisy at night."

Hari Mohan Chatterji, aged 23, was admitted into the Dallunda Asylum on the 26th August 1892. His physical health was indifferent. The note in the case book is:—"Has a peculiar aspect, with a slight strabismus. On being questioned goes through an absurd pantomime and winds up by widely opening one eye with both hands and showing it to you; is quite incoherent at present; refused his food last night and was very noisy and excitable." He had improved considerably by November and was "quieter, but still dirty." In January 1893 he was quiet, cleaner, but not coherent and given to muttering. He improved further and became quite quiet and clean in habits. He had certain twitchings of the fingers and movements, somewhat like those of cholera at times. He was removed by his friends improved, on the 8th May. There is nothing further known about him.

This case seems to be one of toxic insanity, but it is not easy to say whether the ganja or alcohol was the most active agent in bringing on the disease.

January 21st, 1894. J. H. T. W.

---

15. CHOTU *alias* MOTEE.

(Mania recurrent? Cause unknown.)

This case is interesting as showing how little reliance can be placed on information given in the *Descriptive Rolls*, sent to the asylum with lunatics arrested by the police and committed to an asylum under section IV of Act XXXVI of 1858. In his *Descriptive Roll* it is stated that his insanity was due to excessive ganja-smoking, and no mention is made of any previous attacks of insanity. Having made enquiries into this case through the Commissioner of Police, Calcutta, I am able to give the following facts concerning this

man's case:—Chotu had suffered previously from occasional fits of insanity (dates not given). He was found ill and destitute in Collinga Bazar on the 2nd August 1892. He was taken to the Campbell Hospital, and found to be suffering from diarrhœa. On his recovery from the attack of diarrhœa signs of insanity appeared; he "talked incoherently" and was at times violent and inclined to strike other patients in the hospital.

Chotu *alias* Motee, aged 20, and of indifferent physical health, was admitted into the Dallunda Asylum on the 1st September 1892. The 1st note in the case book is:—"Has an excited and unsettled look about his face, but talks fairly coherently, becoming abusive, at times"—September 12th. "Is now quite incoherent. Yesterday smeared himself over with tar." He improved rapidly during November and December, and on January 6th, 1893, I recorded as follows:—"Seems fairly sane to-day; clean and quiet; asks to be released." He remained sane and was discharged cured on the 8th February 1893. According to the man's statement and that of his brother Sookao Mali, he had never indulged in hemp drugs of any description. Is now (January 1894) working as a servant to Mr. Albert of 100, Bow Bazar Street; is living with his brother Sookao at Sibtallah Gully; is now perfectly sane.

There is nothing to show that hemp drugs had anything to do with this man's insanity, and the case illustrates the difficulties to which I have alluded in my evidence already submitted.

January 21st, 1894. J. H. T. W.

---

16. NIZAMUDDIN.

(Toxic Melancholia?)

(Sane on admission to the Dallunda Asylum.)

In 1885 this man was a constable in the Port Blair Police. On the 26th August 1885 he was admitted to hospital "in an excited state; eyes congested and pupils dilated." Was restless and wandered about. "He answered questions rationally, but talked to himself and made grimaces when alone." "The disease appears to be of a temporary nature and to have been induced by smoking ganja." He refused food; was not violent, but was considered an unsafe man to be trusted with firearms, and was therefore discharged from the police in October 1885.

In April 1886 he enlisted in the Upper Burma Military Police, afterwards the 31st (6th Burma Battalion) Madras Light Infantry. His conduct was good, and his health appears to have been generally good. On the 7th September 1892 he was admitted into hospital at Shwebo "in a semi-delirious state." "He was very excited." "He was supposed to be under the influence of bhang and was admitted for *toxic insanity*." "He quieted down under treatment, but seemed vacant and depressed." Sometimes he was depressed, moping, and preoccupied, and at others somewhat excited. He was sent to the Dallunda Lunatic Asylum and admitted there on the 10th November 1892. He was sane on admission, and said his insanity was due to sunstroke.

He was discharged from his regiment, and after remaining sane and quiet for some time was released on the 22nd January 1893. He is an inhabitant of Guzrat, and I do not know to whom to apply for further information.

It seems highly probable that both his attacks were due to the abuse of hemp drugs, to which he was evidently not accustomed as a habitué.

January 21st, 1894. J. H. T. W.

---

17. PORAN PATRO.

(Toxic Mania.)

This man, a Hindu, aged 32, was admitted into the Dallunda Asylum on the 16th of November 1892. In his *Descriptive Roll* it is stated that his father was a lunatic; no cause was assigned for the attack of insanity, nor was its duration noted. He was said to be a

ganja smoker. In the evidence subsequently collected by the Deputy Magistrate of Midnapur (attached to this report) it is stated that he was not a ganja smoker, and the cause of his insanity is thought to have been sudden grief. No cause being ascribed in the papers sent to the asylum with the lunatic, the abuse of hemp drugs was accepted as possible. It is open to doubt whether such a belief was justified, and although the immediate and exciting cause of the attack of mania from which the man suffered may have been excessive use of hemp drugs, the case is not of much value one way or the other, as it is evident that the man had left his home and his friends and cannot have known what he was doing between the time of his departure and the time of his arrest. The man is stated to have been sane previous to the time of his arrest, but, as no dates are given, the evidence is not so valuable as it might have been. The remarks on the medical certificate which accompanied Poran Patro to the asylum are as follows:—" Incoherent, maniacal, dangerous to himself and others, restless, sleepless, very filthy. Very turbulent and aggressive, threw an empty bottle at a prisoner's head in the sub-jail." On admission he was "very violent and destructive; sleepless, but slept well after *sulphonal*, 3 grs. Incoherent, but seems pleased at the suggestion that he should have ganja and tobacco. Eyes very bloodshot; scratches on face; arms swollen from tying (?); two ulcers, one on each shoulder, also one ulcer on the left elbow." By the 7th December he had improved greatly, was quiet but somewhat dirty in habits. Treated with bromide of ammonium. In January he was clean, coherent, and anxious to return to his home.

From that time he remained quite sane and was discharged cured on the 22nd of March 1893. The duration of the actual symptoms of mania was about two months, and the recovery appears permanent, as he is stated to have remained sane and lived quietly in his home since his release from the asylum. I am inclined to suggest that this man may, on leaving his home after the death of his brother and his wife, have taken to ganja or other stimulant to assuage his grief. If, as stated, he was not previously addicted to hemp drugs the amount necessary to produce intoxication or insanity would be less in his case than in the case of one accustomed to use hemp drugs. We must not lose sight of the fact that he had a hereditary tendency to insanity; and his absurd method of indulging in grief strengthens the belief that, his nervous system is not very robust. He is now apparently sane and works as an agricultural laborer.

18. MAHADEO CHAMAR.

(Toxic Mania.)

(Sane on admission to the Dallunda Asylum.)

This man was a syce, and it is stated in his *Descriptive Roll* that he had had periodical attacks of insanity during the previous two years. He was known to be addicted to the use of ganja, but this was not given as the cause of his attack; the cause was entered as "*unknown*." He was found wandering about the Chowringhee Road on the 22nd December 1892. He was shouting at the top of his voice; he thought he was under some religious influence. It was ascertained from his brother, Sadaheo Chamar, and others that Mahadeo smoked ganja six or seven times a day. He was detained in the Campbell Hospital, where he appeared insane, "talking incoherently, being very violent; demanding ganja." The intoxication with its maniacal excitement wore off quickly, for when seen by me at the Dallunda Asylum on the 27th December he appeared sane. The note in the case book is:—" Seems quite rational, quiet since admission; slept well; clean." He was a young man, 35 years of age, and in good physical health.

He continued sane and was released on the 19th of January 1893. This was undoubtedly a case of intoxication due to ganja alone or with other drugs.

I learn that he went to work as a coolie at the Bonded Warehouse No. I, Clive Street. He is quite sane, and has given up the use of hemp drugs as certified by Ruttan Chamar, with whom he lives, Kunchun Chamar, and others.

January 21st, 1894. J. H. T. W.

PATNA LUNATIC ASYLUM (BENGAL).

(SUPERINTENDENT, DR. BOVILL.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
1. Salik Patick; Hindu; Cultivator; Sarun; 30; XIII, 162.	Ganja	Toxic insanity.	Bad ...	Form No. 4 shows— 6. "He was always at home in the village, and some six months ago he went mad, being frightened in a dream." 9. "It is said that his uncle was insane for a short time." 10. "Addicted to bhang." 11. "Cause—bhang-drinking." The Civil Surgeon on 18th February 1892 certified that "he constantly beats his head, is violent, sleepless, sly, uses bad language, and is filthy and mischievous in his habits." Admitted, 18th February 1892. Died, 12th July 1892.	This man was in bad health when admitted, and throughout his stay in the asylum his mental state did not improve. The record of the *post-mortem* examination, which was conducted by an Assistant Surgeon, shows no special sign of brain disease. The Superintendent thinks this a doubtful case, as there is insanity in the family. Hemp drugs may have been the exciting cause.
2. Kali Singh; Hindu; Cultivator; Monghyr; 38; XIII, 170.	Ganja...	Toxic insanity.	Good...	Form No. 4 shows— "10. Addicted to ganja-smoking and eating bhang." 11. Cause—habit of ganja-smoking and eating bhang." "The man was arrested lurking about the fort of Monghyr." The Civil Surgeon certified on 9th May 1892 to the following symptoms. "An insane expression of countenance, frequent and incoherent talk, false accusations, excited manner, restlessness. The man throws himself on the ground at times; at others, waves his arms about. Dirty habits, sleeplessness, and attempts at violence." Admitted, 11th May 1892. Made over to friends, 27th June 1892.	On admission to the asylum he was very excited, very incoherent, and "always asking for ganja." A month later he is shown to have been "quiet and harmless;" but he was still insane (though improved) when made over to his friends. The Superintendent thinks that this was probably a case of insanity due to hemp drugs, at least as the exciting cause, if not more.
3. Gajadhar Ahir; Hindu; Billiard marker; Shahabad; 30; XIII, 164.	Ganja...	Toxic insanity.	Good ...	Form No. 4 shows— 6. "Has been previously in the asylum, but was discharged cured. Since employed as a marker in the Station Racquet Court. Has broken out again." 10. "He was excessively addicted to ganja-smoking." 11. "Cause—inflammation of the brain or other injury to that organ due to abuse of ganja. The insanity is solely due to ganja-smoking." This form is signed by a subordinate "for the District Magistrate." Admitted, 13th March 1892.	This man was admitted first of all on 7th February 1888 and discharged on 26th October 1888. On that occasion his insanity was ascribed, "without doubt," to ganja. It was then said that he (being then 26 years old) had been a ganja-smoker for 11 or 12 years. He is a billiard and racquet marker. He drinks spirits to excess as well as smokes ganja. His asylum history in 1888 was as follows:— "Excited, talkative, restless, and destructive" when he came in.

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
Gajadhar Ahir—*contd.*	Ganja...	Toxic insanity.	Good...	Discharged cured, 24th October 1892.	"Quieter, but very demented" two months later. "Destructive, quarrelsome, and abusive" in June. "Much improved" in August; and "quiet; speaks rationally," in October. On the second occasion (1892) the symptoms and history were much the same. This seems to the Superintendent to have been in all probability a toxic case; and the evidence points specially to ganja as the cause, though the man indulged in liquor also.
4. Siba; Thakur; Brahman; Cultivator; Durbhanga; 25; A. 3½, 42.	Ganja...	Toxic insanity.	Fair ...	The old criminal form shows— 10. "Smokes ganja and drinks bhang." 11. "Cause unknown." 12. "Has been under restraint many times both in Bhagalpur and in Durbhanga Jail." 14. "Assaulted a warder in Bhagalpur Jail." "Assaulted a warder in Durbhanga Jail on 3rd November 1891." "Assaulted a warder in Durbhanga Jail on 3rd April 1892." "Concealed a razor, 19th March 1892." He is intractable, destructive, talkative, and unable to sleep. He flings excrement on the warders. On 9th November 1891 he made water over the grinding mills. Sometimes he does not eat well. Sometimes he works and sometimes he won't. Punishments do not influence him. Exposes his person at times. Was sent up in bad livelihood cases. Was not so mad here, but somewhat mad. The medical certificate of 17th April 1892 shows: "Suffers from great excitement at times. Restless manner. Insubordinate and not amenable to punishment." Admitted, 7th June 1892.	This man's asylum history shows that in July 1892 he was constantly excited and violent, destructive, sleepless, incoherent; in September, "stupid, silly, and incoherent;" and violent again in October, and until his escape in December. On his recapture in the end of January he was again "excited and noisy," and there was no improvement up to April. In May he became quieter, and the Superintendent now thinks him sane. The people of his village said that this man took ganja; but he has all along denied it in the asylum. To us also he denied the habit; but he recognized ganja when shown to him. The Superintendent is inclined to think that this is a case of insanity in which hemp drugs form merely the exciting cause. The relapses and repeated outbreaks seem to point to this, but the full effect of the asylum history is spoiled by the escape of the lunatic and the chances he had of returning to his evil course in January last.
5. Maghan Gir; Hindu; Beggar; Patna; 26; A. 3½, 13.	Ganja	Sane on admission	Good...	This man was not a new case in 1892. He was admitted in 1891, and, being cured, was sent to take his trial on 16th February 1892. He was readmitted after his trial on 5th March 1892, and was then "sane." This explains the difference between Statements VI and VII for this asylum.	This man's asylum history is as follows: when admitted in July 1891 he was "excited, incoherent, calling loudly for ganja. Not violent, restless, sleepless." In August he was "quieter" and gradually improved until December, when he was sent up for trial. On re-admission in March he was "quiet, orderly, clean;" and has been entered

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from register and from inquiry from Superintendent.
5. Maghan Gir—*contd.*	Ganja ...	Sane on admission.	Good...	The man was arrested for trespassing at night on the railway line: he entered a third class carriage, and broke a window on 31st May 1891. The Civil Surgeon on 26th June 1891 certified that he had "peculiar expression of eyes, laughs and talks without reason, answers questions without sense, and is sleepless." Form No. 3 (dated 28th October 1891) shows :— 10. "Formerly addicted to smoking ganja." 11. "Nothing is known about the cause of insanity." But in the medical history sheet, dated 14th November 1891, Dr. E. Russell records, "Probable cause of insanity, ganja. Type, toxic insanity; duration, eight years; sane since July 1891."	as "sane" every month since. He will be released when the period of detention required by rule expires. He states that he used to smoke ganja regularly, sometimes ten chillums a day. He has also taken bhang, but never liquor. He had smoked ganja for ten years. The history of this case points to temporary insanity from ganja.
6. Bihari Runiar; Hindu; Shopkeeper; Durbhanga; 38; A, 3½, 13.	Ganja...	Toxic mania.	Bad ...	The old criminal form shows— 8. "Insane since three months." 10. "Was addicted to ganja a year before, but was addicted to spirits up to time he became insane." 11. "Cause—not known." 15. "Was talkative and filthy in habit; was refusing to eat and neglecting business. Did not commit suicide (*sic*) or murder; was sometimes habituated to go naked while he was at home." 21. "The accused entered the house of the complainant and stole a *lota* worth 12 annas and was arrested." 22. "Was addicted to ganja and afterwards turned insane." The medical certificate of 29th February 1892 shows that "he is filthy in his habits, defæcates and micturates anywhere and everywhere. He is vacant and bothers in manner. He will do no work and laughs or cries when spoken to. Sometimes he will not wear any clothing and seems insensible to cold." He was reported to be destructive. Admitted, 24th March 1892. Died, 23rd September 1892.	The Superintendent considers that there is no proof that this case was caused by hemp drugs. The asylum history shows that there was no improvement there. The *post-mortem* examination was conducted by an Assistant Surgeon. The record makes no reference to the brain. It should be noted that under the heading 22 in the descriptive roll ("the circumstances and causes which led to the person becoming insane") the same officer ascribes the insanity to ganja as he had said only a few lines above, that nothing was known as to the causes. The entry under heading 10 of the same document certainly does not point to ganja.
7. Ram Sarup Das; Hindu; Cultivator; Chumparun; 30; XIII, 168.	Ganja...	Toxic insanity.	Good ...	Form No 4 shows— 6. "Past history not known." "Rambles over the country."	This man was "quarrelsome, abusive, excitable, and incoherent" when he was admitted to the asylum. He was improving in July and went on improving until discharged "cured."

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Tpye of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry fom Superintendent.
7. Ram Sarup Dass—*contd.*	Ganja...	Toxic insanity.	Good...	"Tried to set fire to an indigo factory building at Thomasnagar." 10. "Smokes ganja and tobacco." 11. "Cause—not known." 13. "Beats people with fists. Intractable and dangerous. Does not refuse to eat and drink. Abuses people on the road and obstructs females passing." Medical certificate of 28th March 1892 says, "On admission to Jail the lunatic was highly excited and inclined to be violent. He was incoherent and abusive. I observe daily that he is very noisy and hear him singing and talking at the height of his voice. He has been in Jail since 29th February and has slightly improved." Admitted, 1st April 1892. Discharged cured, 25th February 1893.	The Superintendent thinks that the insanity was due to ganja; because it is said that the man took ganja and because the symptoms disappeared rapidly. The Superintendent has no evidence that the man took ganja, except the descriptive roll, and cannot speak to any specific ganja symptoms.
8. Adit Misr; Hindu; Cultivator; Chumparun; 22; XIII, 171.	Ganja...	Toxic insanity.	Bad ...	Form No. 4 says— 8. "Always lived in the village; was sent up by the *darogha* of police for having damaged some property belonging to Jaiman Misr. Is insane for three months." 10. "Not addicted to ganja, opium, or ardent spirits." 11. "Cause—not known." The medical certificate of 20th May 1892 says, "Noisy, incoherent in his conversation; violent in his conduct; mischievous in his acts. Subject to delusions, and unable to take care of himself. Assistant Surgeon of Bettiah Sub-Jail noted that he is filthy in his habits, abusive, keeps himself naked, tears blankets, makes noises, and sleeps very little." Admitted, 27th May 1892.	The Superintendent thinks that insanity may in this case have been caused by ganja-smoking, but that there is no proof whatever that this was the cause. He cannot say that the man is a ganja insane from any of his symptoms; but he is recorded to have admitted ganja-smoking when received into the asylum. He was also a religious beggar, and most of them smoke ganja. These seem the only grounds for showing the case as due to ganja. Apart from a ganja history it would, in Dr. Bovill's opinion, be impossible to diagnose a case as due to ganja. Before us this man professed not to know ganja or bhang, and denied ever using either. He had a pained, contracted expression of face. He retained this under examination. The sight and smell of ganja caused no change of expression. He is said to have improved since he came to the asylum, but to be still insane and uncertain. He evidently denied the use of ganja before the police as he does now; and the only connection between him and ganja is an entry within parenthesis on 16th June 1892 ("admits to ganja-smoking").

NOTE.—The total number of admissions in 1892 was—

Criminal	Males	...	20
	Females	...	1
Non-criminal	Males	...	14
	Females	...	3
	TOTAL	...	38

Of these, the above eight cases were attributed in Statement VII to hemp drugs.

Extract from the evidence of Surgeon-Lieutenant-Colonel Bovill, regarding the Patna Asylum hemp drug cases for 1892.

Taking the cases in the same order as the Commission :

(1) *Salick Patick.*

I stated this is a doubtful case, as there is insanity in the family. Hemp drugs may have been the exciting cause. The report of a full enquiry conducted by Babu Bhawani Prasad Neogi and the Civil Surgeon of Saran, states "that the witnesses who were examined, including the mother, uncle, and the next-door neighbours of the lunatic, agree in saying that Salik Patick never consumed ganja, bhang, alcohol, opium, dhatura, or any intoxicating drug whatever. They all attribute the lunacy to fright in a dream."

The Deputy Magistrate supposes that Lakhu Dusadh, the chaukidar who brought the lunatic to the authorities, is responsible for the statement that the lunacy was due to bhang. He has been unable to find Lakhu Dusadh and to take his statement. This is, therefore, a very doubtful case and depends on the *Descriptive Roll*, which gives bhang as the cause, and the statement of the lunatic, which gives ganja as the drug he used. The first entry in the case book is as follows:—"February 18th. On admission incoherent, restless, sleepless; wanders aimlessly (says he used to smoke ganja)." The *Descriptive Roll* states: "He was addicted to bhang, which is said to be the cause of his being insane."

(2) *Kali Singh.*

I stated this was probably a case of insanity due to hemp drugs, at least as the exciting cause, if not more. A full enquiry on the spot held by H. Wheeler, Esq., Sub-Divisional Officer of Biguserai, states that "Kali Singh himself, his relations, and a crowd of villagers testified that he commenced ganja smoking 15 or 16 years ago. He learned it on a pilgrimage from the sadhus."

For some time he only took two chillums a day. About three or four years ago he increased the number to four, and three or four months before his detention he raised the quantity suddenly to six, seven, and eight chillums. His son says: "There was no *thickana* about it; he smoked as much as he could lay his hands on. For two or three months before his confinement he was in the village more or less a lunatic, continuing the excessive smoking. No other cause of insanity could be discovered." This seems a good case. He admitted the use of ganja.

(3) *Gajadhar Ahir.*

I stated: "This seems in all probability to have been a toxic case, and the evidence points specially to ganja as the cause, though the man indulged in liquor also." Moulvie Syed Nasiruddin, Deputy Magistrate, investigated the case in consultation with the Civil Surgeon of Arrah. The report states that "He was of temperate habits and almost a sadhu when he became insane all of a sudden about 6 or 7 years ago (first attack of insanity). He had no cause for grief, jealousy, or misfortune. He had no illness or injury before the insanity began. He fell in company of a sadhu fakir and took to smoking ganja. He smoked for 10 or 12 days only (smoking 4 or 5 chillums daily), when all at once he took into his head to renounce all worldly affairs and turn a fakir himself. (*Note.*—He was then mad and was sent to the asylum. He remained insane for about 5 months, and was discharged cured in 8 months.) He took care not to smoke ganja again, and thus abstained for 5 years, after the lapse of which period he could not

resist the temptation, and thought he was out of danger of a relapse. He again took to smoking ganja. He had smoked for 4 or 5 days only very moderately, when the relapse came on."

He was admitted to the asylum, and recovered after 7 months. The asylum history does not agree with this report. The man, no doubt, took ganja. On his first admission it is stated that he had taken it for 11 or 12 years that is, from boy hood, he being then about twenty-six. The report says he only smoked it for 10 or 12 days. The report says he remained sane for 5 years after he was discharged. He was back in the asylum within three years and five months of his discharge. I consider this a real case of insanity produced by ganja.

(4) *Siba Thakur.*

I thought that this was a case of insanity in which hemp drugs formed merely the exciting cause.

The report submitted by the Joint Magistrate of Dharbanga and the Civil Surgeon stated that "He took to thieving at the early age of twelve; was convicted when about 18 years old. He used to smoke ganja in small quantities; but he was particularly addicted to women. He never showed signs of madness before he went to Jail the last time; on the contrary he was a very cunning thief. He must have become mad in Jail."

This man appears to have always been of a wandering, dishonest, and lazy habit and to have lost control of his temper. He was often under restraint in Bhagalpur and Darbhanga Jails, and assaulted a warder in the Darbhanga Jail in November 1891 before his last conviction.

The *Descriptive Roll* states that probably he was insane when formerly in Jail.

He is still dangerous, violent, destructive, and filthy after 18 months' treatment. I still doubt that this case was entirely caused by hemp. From an early age he seems to have been vicious and uncontrollable.

(5) *Maghan Gir.*

I stated that the history of this case points to temporary insanity from ganja.

The further report on the case by the Magistrate of Muzaffarpur, which was received on 11th January 1894, quite bears out this opinion. There is no hereditary and no other known cause of insanity. Maghun Gir is a fakir, but has abstained from sexual intercourse all his life. He began to smoke ganja about a month before he became insane. He tried to commit suicide by lying down in front of a train, and 7 or 8 days later entered a railway carriage and broke a pane of glass. For this he was arrested, and, being insane, was sent to the asylum. Report states: "He consumed about the same quantity of ganja, *i.e.*, two or three chillums daily for about a month. He took bhang regularly." Maghan Gir himself says he used to smoke ganja regularly for ten years, sometimes 10 chillums a day, and that he also took bhang. The only witness examined is the lunatic's brother, he, Maghan Gir, being absent on a pilgrimage.

This appears a case of insanity due to ganja.

(6) *Bihari Runiar.*

I stated that there was no proof that this case was caused by hemp drugs. The report conducted by the Joint Magistrate and Civil Surgeon of Durbhanga states that "He was addicted to ganja and to drink, but not in excessive quantities. He went to the Sonepore Fair in the best of health. He returned after a stay of 7 to 10 days completely mad, and after staying a few days at home he disappeared. He was a wrestler." This is most likely a case of insanity caused by ganja.

He, being already a ganja smoker, probably indulged in the vice to excess while at the fair. I hear that wrestlers often take ganja and bhang.

(7) *Ram Sarup Das* alias *Ramcheriter Thakur.*

An enquiry was held by Deputy Magistrate, Moulvi Syed Karim, in consultation with the Civil Surgeon of Champaran.

I thought that the insanity was due to ganja, because it is said that the man took ganja and because the symptoms disappeared rapidly. I had no evidence that the man took ganja except the *Descriptive Roll.* The report states that there is no family history of insanity, and that "he was not addicted to ganja-smoking before or during the time that he was insane or to any other intoxicants, such as alcohol, opium, etc. Owing to certain reverses of fortune, he fell into great pecuniary difficulties and was obliged to sell his trees and mortgage his lands."

"These difficulties exercised a very injurious influence on his mind, and he became seriously ill with fever a year before he turned insane. It is difficult to say why the insanity in the above case was ascribed to ganja-smoking, the result of the enquiries conclusively proving that it had no connection whatever with the use of that drug."

This case appears to have been due to misfortune.

(8) *Adit Misr.*

I stated that insanity may have been caused by ganja-smoking, but there is no proof whatever that this is the case. He was recorded to have admitted ganja-smoking, and he was a religious beggar. The report made by the same officers as in the last case (No. 6) states that "None of the relatives of Adit Misr could be traced, and consequently no further enquiries could be made in the case."

The result of the more careful enquiry, therefore, is that the cases of Salik Patick and Siba Thakur are very doubtful; that of Ram Sarup Das is altogether contradicted. The cases of Kali Singh, Gajadhur Ahir, Bihari Runiar, and Maghan Gir appear to be really due to hemp drugs; and that of Adit Misr has no further light thrown on it by the enquiry, and stands on his own admission and the fact of his being a religious beggar or devotee.

DACCA LUNATIC ASYLUM.

(SUPERINTENDENT, DR. COBB.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiry from Superintendent.
1. Charan Das; Hindu; Cultivator; Dacca; 66; No. K 117.	Ganja...	Dementia	Good...	This man was first admitted to the asylum in September 1857 at the age of 31 and discharged in June 1864. Re-admitted on 1st October 1864. In the register for 1864 it is entered: "Stated in his *Descriptive Roll* to have been insane for last nine years; has not had any of his relatives insane; is addicted to ganja, which is the assigned cause of his insanity. During insanity he has been intractable, violent, destructive, at times irascible, talkative and incoherent at times, silent and generally melancholic." He escaped in 1867, 1868, and 1871, and then again on the 10th December 1891. He was recaptured and sent back into the Asylum by the Police on 8th January 1892, and so appears as an admission of that year. None of the papers in this case are now forthcoming.	Since admission to the asylum in 1857 he has been reported to be intractable talkative, and incoherent, and filthy in his habits. Is always watching an opportunity of escaping. In October 1872 Dr. Wise reports that he is a stupid fellow who brightens up when ganja is mentioned. In May 1883 he was excited for four or five days, was restless and destructive, and was so violent that he had to be kept under restraint. In November 1887 he is reported to have been occasionally excited and violent. As a rule he was quiet and harmless. He died of dysentery on 22nd July 1893. The *post-mortem* examination showed (*inter alia*)—"*Head.*—There was a large quantity of serous fluid in the cavity of the arachnoid. Brain healthy, but somewhat anæmic and small; the ventricles contained a small quantity of serous effusion, but otherwise healthy." (Dr. Cobb.)
2. Dayal Dass Bairagi; Hindu; Beggar; Dacca; 46; No. K 345.	Ganja...	Not insane.	Fair ...	This man was admitted on the 6th March 1891. He was accused of theft, but found to be incapable of making his defence owing to insanity. The Deputy Magistrate of Munshiganj (committing officer) reported that his *Descriptive Roll* could not be furnished as no trace of his relations could be found and no information could be obtained regarding him. On the 2nd November 1891 he was discharged to stand his trial and re-admitted on the 11th January 1892, having been acquitted on the ground of insanity. Discharged without security on the 20th September 1893.	On 27th April 1891 there is this entry in the register: "Since admission he has appeared sane. He admits he was addicted to ganja. This probably was the cause of his being insane for a time." On 12th June 1891 it is entered, "Appears quite sane. Answers questions rationally. Gives a description of the theft committed, and says he was insane at the time." He never during either of the two periods of detention in the asylum showed any symptoms of insanity. This case is specially treated in Dr. Cobb's evidence under his answer to question 57 (*a*). Dr. Cobb appears to have discussed the matter with the patient after he recovered and recorded particulars ascertained from him.
3. Baishmar Chandra Saha; Hindu; Shopkeeper; Dacca; 45; No. L 153.	Ganja...	Mania ...	Indifferent.	Admittted on 25th January 1892. Civil Surgeon certified on the 14th January: "He is talkative and incoherent. He is very excited in manner. He chatters nonsense to himself. He is sleepless, troublesome, and incoherent. He rubs his body with dirt. He is not violent." In his *Descriptive Roll*, which is signed by a Sub-Inspector, it is stated that he has been insane for about four months, that nothing is known regarding any of his relatives	The entry in the register ascribing the insanity to ganja-smoking was made by the Overseer immediately on the man's admission. The first entry by Superintendent, Dr. Nicholson, is on 27th January as follows: "This man became more and more excited and restless since his admission; he was very restless night and day, rarely sleeping, ate his food indifferently, destroying most of it by mixing it with dirt before eating. Shouted and yelled at times, making a

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiry from Superintendent.
3. Baishmar Chandra Saha—*contd.*	Ganja...	Mania.	Indifferent.	being insane, that the lunatic "is addicted to ganja and ardent spirits," and that he set fire to his own house. He is also said to be violent and dangerous and disposed to suicide. It is distinctly stated that "no cause could be assigned" for his insanity.	great noise, went naked, destroying clothes when given him. He was filthy in his habits, constantly knocked his head against the wall, had thereby made a sore on his forehead." "29th January 1892.—Continued in a very exhausted state as the result of his excitement, and died to-day of the exhaustion of mania. His body was made over to his friends as they came to claim it."
4. Uzir Ali Sha; Musalman; Fakir; Backerganj; 75; No. L 161.	Ganja...	Toxic insanity.	Indifferent.	Admitted on the 31st January 1892, accused of murder, but found to be incapable of making his defence on the ground of insanity. It is stated in his *Descriptive Roll* signed by the "committing officer" that he has been insane for about three months, that it is "not known" whether any of his relatives have been insane, and that he was "formerly addicted to ganja;" said to be dangerous. He is said to have killed a woman with a *dao* and *lathi*. "The accused, who was staying in the house of the deceased's father, entered at night the room in which she was sleeping, and having brought her out killed her by repeated blows. He professed to be a "fakir," and to foretell the future events. He had many disciples, and used to distribute medicines to people. He did not live in the village, but came to it occasionally, so nothing was known of him. It is distinctly stated that the cause of insanity is "not known."	In this case the entry of "ganja-smoking" in the register as the cause of insanity was made by the Overseer on the man's admission to the asylum. He was admitted on the 31st January 1892, became more and more excited, and "died of exhaustion of mania" on 24th April 1892. In the *post-mortem* examination Dr. Cobb records (*inter alia*): *Head.*—"There was a small quantity of serous fluid in the cavity of arachnoid. Brain healthy. Its ventricles contained a small quantity of serous effusion."
5. Swarup Kaibarta; Hindu; Cultivator; Sylhet; 25; No. L 169.	Ganja...	Toxic insanity.	Fair ...	Admitted on the 19th February 1892, accused of (1) voluntarily causing grievous hurt by a dangerous weapon; and (2) voluntarily causing hurt by a dangerous weapon. The *Descriptive Roll* (signed by the Deputy Commissioner) says: "On the 31st October 1891 the accused all on a sudden wounded his mother with a *dao* while in a state of temporary insanity, as appeared from the evidence of the witnesses for the prosecution." It also shows the man to have been insane since September 1891; none of his relatives were insane. "He used to take ganja sometimes, but not too much." His insanity is said to have been caused "by sudden attack of disorder in brain."	The entry in the register giving "ganja-smoking" as the cause of insanity was made by the Overseer immediately on the man's admission. The first entry by the Superintendent is on 9th July 1892 as follows:— "Has been very dull and melancholic since his admission. Can hardly be got to answer a question, and if he does, is irrational. Mutters to himself frequently; prefers solitude; will take his food if it is given to him, but asks for nothing." In September 1893 he is reported to be obstinate, and refused to work, destroyed his clothing and remained naked, but was not aggressive. There has been no improvement.
6. Sheikh Waris; Musalman; Cultivator; Dacca; 28; No. L. 175.	Ganja...	Not insane.	Good...	Admitted on the 22nd February 1892. Was tried for house-breaking with theft, but was acquitted on the ground of insanity. His *Descriptive Roll* (signed by the Joint Magistrate) says: "On the night of the 25th January he broke the lock of a room of the Dacca Judge's Court and stole some papers, forms, and books, etc." It is further stated that	On the man's admission to the asylum the Overseer entered "ganja-smoking" as the cause of insanity, but left the "disease" blank. The Superintendent afterwards filled in this blank with "not insane," as the man was "quite rational" from the time of his admission. He was made over to his friends on 22nd May 1893.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiry from Superintendent.
6. Sheikh Waris-*contd.*	Ganja...	Not insane.	Good...	he has been insane since Asarh 1298 (June 1891) and "no particular cause" is assigned for his insanity. "He is not at present addicted to intoxicants, but, as he stated in his statement, used to smoke ganja." It was "not known" whether any of his relatives were insane.	We have examined the records in this case. The only mention of ganja is by the Civil Surgeon in his evidence before the Joint Magistrate. He said: "I had this man under my observation for some days in Jail. He showed no signs of insanity. He may be a ganja-smoker, but I cannot say." This was on 10th February 1892. On the same day the prisoner said, "I do smoke ganja sometimes. I had not smoked ganja on the day that I took these things." On the first idem he had said "I have committed a sin and ask for pardon. I was mad and lost my senses. I am not mad now and want to go home." He made no mention of ganja on this earlier occasion. There is no ground in the record to connect the alleged insanity with hemp drugs.
7. Durga Churn Chunga; Hindu; not known; Dacca; 48; No. H 337.	Ganja...	Toxic insanity.	Fair ...	On 26th August 1889 this man was admitted to the asylum. The papers show that his family history was "not known," that the man "smokes ganja at times," and that the cause of insanity is "not known." Yet the entry made in the register on his admission there is as follows:— "This man is said to have been insane for 1½ years, and ganja-smoking is assigned as the cause of his insanity." "He suffered from 'recurrent mania,' but after a long lucid interval he was discharged on 25th November 1890. He was re-admitted on 2nd April 1892, and the *Descriptive Roll* shows that he had been insane 'since ten or twelve years,' and that 'lunatic's brother was insane for some time.' It is stated that it is 'not known' whether the lunatic was addicted to intoxicants, and the cause of insanity is 'not known.'" Dr. Nicholson (Civil Surgeon and Superintendent of the Asylum) adds in his certificate: "He has on previous occasions been in the Asylum, his insanity being induced by ganja." But there is no authority given for this statement, which is probably based on the entry in the Asylum register quoted above.	Since his readmission this man has had three fits of recurrent mania. During fits he is very excited, dirty, abusive, restless, and violent. When we visited the asylum he was in a terribly maniacal condition, pacing up and down his cell and shouting and beating the wall.
8. Madhavram Dev; Hindu; Cultivator; Sylhet; 45; No. L 215.	Ganja...	Toxic insanity.	Good...	In the *Descriptive Roll* this man is said to have been insane for two years, and "consumption of ganja" is assigned as the cause of his insanity. He has a "scar on centre of forehead." He has not had epilepsy. He is violent at times, and struck a boy and a man with sticks and caused a slight wound to the former. Sometimes goes naked. Is filthy	The Overseer entered "ganja smoking" as the cause of insanity on the patient's admission into the Asylum, but left the disease blank. This blank the Superintendent subsequently filled in with "Toxic insanity?" (as doubtful). The man's Asylum history is thus summed up. "Subject to fits of excitemtent. Fits last about a month or six weeks, and the

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiry from Superintendent.
8. Madhavram Dev —*contd.*	Ganja...	Toxic insanity.	Good...	in his habits. His relatives were not insane. Mr. Banerji, Civil Surgeon, of Sylhet, certified to "mental depression, sulkiness, wakefulness, often throws away his food, given to fits of crying, gave silly answers to questions put," and he adds that it was communicated to him by others that the lunatic "used to take ganja. He was mad before (twice)."	intervals two or three months." (February 1894.)
9. Gagan Chunder Chathati; Hindu; Priest; Dacca; 28; No. L 271.	Ganja...	Toxic insanity.	Good...	Admitted on the 25th June 1892. It is stated in his *Descriptive Roll* that he has been insane for six years, that it is "not known" whether any of his relatives have been insane, and that he is "addicted to ganja and spirits," but that the cause of his insanity is "not known." He has not had epilepsy. He is violent, mischievous, troublesome, and struck his mother with a *dao*, and now attempts to do the same if opportunity allows. The medical certificate says:—"Talks excitedly, at times incoherently, says there is a conspiracy against him, and that he wishes to have connection with his mother, also told me that he strikes his friends because he loves them. He assaulted the Asylum Overseer in my presence this morning. Refuses food at times, sleeps badly, gives trouble when bathing, and is generally intractable.	The entry of "ganja" as the cause was made by the Overseer when the man was admitted. The "disease" was then left blank, but the Superintendent subsequently entered "toxic insanity?" (as doubtful). Since admission he has been noisy, talkative, incoherent, indecent, abusive, kicked the Overseer without any reason. He is generally troublesome and unmanageable. The Superintendent records that he "denied that he ever took ganja."
10. Garua *alias* Goberdhan; Hindu; Kuli; Dacca; 37; No. L 287.	Ganja...	Toxic insanity.	Good...	Admitted on the 10th July 1892. The *Descriptive Roll* shows the cause of insanity as "not known," but that the man was "addicted to ganja." It is "not known" whether any near relative has been insane, or whether the lunatic has had epilepsy. He is "mischievous, troublesome," assaults people, and is also abusive. Civil Surgeon certified: "He is noisy, violent, abusive, dirty in his habits. He told me that he knew of a hidden treasure in a village, and offered the Asylum Overseer a share of it if he would go there with him. Does not sleep, talks about fairies, says he has stolen Rs. 800 belonging to me."	On admission the Overseer entered "ganja" as the cause, but left the disease blank. The Superintendent subsequently entered "toxic insanity?" (as doubtful). Noisy, troublesome, and violent soon after admission. Shortly after he became much quieter, but talkative and incoherent. Has lost his delusion about treasures and of fairies. There is no improvement.
11. Narayan Das; Hindu; Beggar; Dacca; 26; No. L 327.	Ganja...	Toxic insanity.	Indifferent.	Admitted on 20th August 1892. The *Descriptive Roll* shows that the man's relatives are "not known," that it is "not known" how long he has been insane, or whether any near relative has been insane; that "the lunatic used to smoke ganja previously, and now is also addicted to that," and that the cause assigned for the insanity is "smoking of excessive ganja." He was accused of theft and found to be incapable of making his defence.	On 12th May 1893 the entry is—"Has improved very much since admission, and is now quiet and tractable, but not quite coherent in his replies to questions." In February 1894 he was reported to be sane and capable of making his defence.

Hemp Drug cases admitted in 1892—concld.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiry from Superintendent.
12. Manohar Mahanta; Hindu; not known; Cachar; 31; No. L 335.	Ganja...	Toxic insanity.	Good...	Admitted on 23rd August 1892. The *Descriptive Roll*, signed by the Civil Surgeon, Dr. Partridge, shows that the man's friends are "not known," nor the duration of the insanity, nor whether any near relative was insane, that the lunatic was "addicted to ganja," and that "no other cause is known except what is mentioned above." The lunatic has not had epilepsy; he is violent. He "does not speak." The medical certificate says, "Dirty in habits, offers violence to his attendants, refuses food, talks nonsense"; and there is added, as communicated by others, "lunatic is addicted to ganja, beats and strikes people, does not speak."	On the man's being admitted, the Overseer entered "ganja" as the cause, leaving the disease blank. The Superintendent subsequently entered "toxic insanity?"—(as doubtful). On October 22nd, 1892, we have the entry:—"Is very violent and disposed to strike, is abusive, noisy, and dirty in his habits. Is kept in a separate cell, sleeps and eats well." There has been no change in this man's condition.
13. Narayan Nawa; Hindu; Tea Coolie; Cachar; 21; No. L 391.	Ganja...	Toxic insanity.	Good...	Admitted on the 29th October 1892. The *Descriptive Roll*, signed by the Civil Surgeon, Dr. Partridge, shows the duration as "about two months," that no near relative has been insane; that the lunatic has not had epilepsy; that he was "addicted to ganja," and that "no other cause is known except what is mentioned above." The lunatic is described as "violent." The medical certificate states: "Dirty habits, violent, tries to beat people, talkative and noisy"; and there is added as communicated to the Civil Surgeon by others, "said not to be violent, is a ganja-smoker."	On admission he was violent, talkative and noisy, dirty, and indecent and destructive. In February 1894 it is said, "has improved slowly, and since the last two months has become quiet and rational."
14. Padai Ram; Hindu; Constable; Faridpur; 28; No. L 407.	Ganja...	Toxic insanity.	Good...	Admitted on the 18th November 1892. The *Descriptive Roll*, signed by the Joint Magistrate, shows duration as one month, that no near relative of the lunatic has been insane, that he is "addicted to ganja and bhang, and drinks at times," and that "no particular cause is assigned" for his insanity. He has not had epilepsy. Has a delusion that he has evil spirits inside him. Is dirty in his habits. The Civil Surgeon certified: "Hallucination about some evil spirits being inside him, dirty habits, *e.g.*, urinating and defæcating in bed, and trying to put fæces into his mouth. Being quite violent and trying to strike people without any reason, and muttering to himself throughout the day." He adds, as communicated by others, "is a confirmed ganja smoker."	The first entry by the Superintendent is dated 29th December 1892: "Is now quite sane." He continued sane until his discharge on 1st February 1893.
15. Narayan Das; Hindu; *nil*; Dacca; 26; No. L 327.	Ganja...	Toxic insanity.	Indifferent.	The history of this case is described in case No. 11. The man had been sent (though apparently still insane) to appear before the Sub-Divisional Officer of Narayanganj on 1st November 1892, and re-admitted on the 3rd idem. His case is consequently shown twice on the returns.	.....

NOTE.—The total number of admissions in 1892 was—

Criminal	Males	...	18
	Females	...	6
Non-criminal	Males	...	18
	Female	...	1
	TOTAL	...	43

Of these, the above 15 cases were attributed in Statement No. VII to hemp drugs and only eleven of them are entered under "Toxic insanity" in Statement VI.

20th February 1894.

NOTE ON CASES OF INSANITY ATTRIBUTED TO THE USE OF HEMP DRUGS ADMITTED INTO THE DACCA LUNATIC ASYLUM DURING 1892.

(Submitted by Surgeon-Major Cobb to the Commission when orally examined.)

1. *Charan Dass.*—There is no reason to suppose that ganja was the cause of this man's insanity, except the entry in his *Descriptive Roll*, in which it is stated that he was addicted to ganja, and a remark by Dr. Wise in 1872 that "he is a stupid fellow, who brightens up when ganja is mentioned."

The history of his case is not that of a ganja maniac, and the *post-mortem* appearances suggest chronic degenerative changes in the central nervous system.

2. *Dayal Dass Bairagi.*—I have no doubt that this was a case of temporary insanity induced by smoking ganja. He is example No. 1. in the evidence which I have already given. The history of the gradual supervention of his insanity under the increasing doses of ganja and his rapid recovery when confined are instructive. The fact that his father was a ganja smoker is worthy of notice. These facts I discovered in careful personal examination of the man.

3. *Baishmar Chandra Saha.*—There is no evidence of his being a ganja smoker beyond the entry in his *Descriptive Roll* that he was addicted to ganja and spirits. The case was evidently one of simple mania.

4. *Uzir Ali Sha.*—The evidence of ganja-smoking in this case is very untrustworthy. It is vaguely stated in his *Descriptive Roll* that he was *formerly* addicted to ganja. The case was probably one of simple mania.

5. *Swarup Kaibarta.*—There is not the slightest reason for supposing ganja-smoking to have been the cause of this man's insanity other than the entry in his *Descriptive Roll*. On the contrary, the case presents all the characteristics of simple melancholia.

6. *Sheikh Waris.*—This man was found to be quite sane on admission to the Asylum. There is not a particle of evidence to support the view that ganja caused his insanity, if he ever was insane.

7. *Durga Churn Chunga.*—This is undoubtedly a case of recurrent mania. Beyond a vague reference of ganja-smoking in his *Descriptive Roll*, there is no reason to attribute his insanity to a toxic cause.

8. *Madhavram Dev.*—This patient's insanity is definitely attributed to the use of ganja in his *Descriptive Roll*, but I think it is entirely doubtful if the drug had anything to do with it.

9. *Gagan Chunder Chathati.*—This is a doubtful toxic case. It is stated in the *Descriptive Roll* that he was addicted to ganja and spirits.

10. *Garua.*—There is no evidence of ganja being the cause of insanity except the fact stated in the *Descriptive Roll* that he was addicted to ganja.

11. *Narayan Das.*—This man is an up-country fakir, and was known to be an excessive ganja smoker, and he does not deny the fact. The whole history of his case leads me to the conclusion that ganja was the exciting cause of his insanity.

12. *Manohar Mahanta.*—The entry in the *Descriptive Roll* and the medical certificate that the "lunatic is addicted to ganja" are the only reasons for supposing this to be a case of toxic insanity. In view of the fact as shown by the papers that this man's relatives were not known and nothing else was known of his case, the above entries are of less weight than they would otherwise have been.

13. *Narayan Nawa.*—This appears to be a case of insanity induced by the use of ganja. I base my opinion on the opinion of the Civil Surgeon of Cachar and on my own observation of the case.

14. *Padai Ram.*—This case also appears to be one of toxic insanity. I cannot at present give reasons for this view.

Report of Surgeon-Lieutenant-Colonel Russell, Superintendent of the Dacca Lunatic Asylum, submitting further information regarding the Hemp Drug cases of 1892.

1. *Charan Das.*—Report not received.

2. *Dayal Dass.*—In this case no further information can be gathered by the Magistrate. I have nothing to add to the facts already recorded and no means of testing the diagnosis. Nothing has been heard regarding any recurrence of insanity since his release.

3. *Baishmar Chandra Saha.*—Had been addicted to ganja-smoking from his youth. Had heavy business losses. A year after this was obviously insane. Not ascertainable if consumption of ganja became excessive after these troubles. His father and mother are reported to have been of weak mind. Of two sisters, one suffers from mild idiocy. This case might be diagnosed as due to "heredity," and perhaps accelerated by use of ganja.

4. *Uzir Ali Sha.*—The Magistrate (Backerganj) reports, that it is not known that this man ever had used ganja. It is known that he did not use it for the last three or four years immediately before he became insane. Diagnosis suggested—"disease mania, cause unknown."

5. *Swarup Kaibarta.*—No history of heredity. Reported to have occasionally smoked ganja without any noticeable effect. He had an improper intimacy with a neighbour's wife. This coming to the husband's ears, a violent scene occurred. Mental unsoundness was noticed for the first time in Swarup Kaibarta immediately after this scene. Case might probably be more correctly diagnosed as "emotional excitement."

6. *Sheikh Waris.*—This case seems to have been recorded as due to ganja on evidence of a very slight character. The history of the case shows that the man lost his house, land, and means of living; great depression followed. About this time he drew on himself the curse of a fakir of great repute for sanctity. These troubles preyed on his mind; he became peculiar and eventually insane. I should diagnose this case as due to "grief and anxiety." It is questionable whether ganja comes in as even a remote cause. No history of heredity.

7. *Durga Churn Chunga.*—The Magistrate (Dacca) reports (24th May 1894): "He does not appear to be in the habit of smoking ganja, and the real cause of his insanity cannot be ascertained." "Anxiety regarding his want of means may have turned him mad." The actual ascertained facts seem to justify a diagnosis—"Mania, cause not known," rather than "toxic insanity, cause ganja."

8. *Madhavram Dev.*—Incurred business losses which swallowed up the small economies of many years and ruined him; became morose and reckless; took to using ganja in large quantities; became gradually insane. Report says: "It was after Madhavram betrayed signs of mental aberration that his people came to know of his bad habit." That he used ganja before his troubles is not certain. Suggested diagnosis—Mania: *causes* (1) grief, leading to (2) excessive use of ganja.

9. *Gagan Chunder Chathati.*—The Magistrate (Dacca, 24th May 1894) reports; "This man was never in the habit of taking ganja." He was a school-master. A book he wrote as a text-book was rejected by the Committee. He was then unsuccessful in examination for a mukhtiarship. Depression ensued; he took to drink, and eventually became insane. No history of heredity. The facts as now recorded seem to warrant a diagnosis of toxic insanity, cause alcohol.

10. *Garua* alias *Goberdhan.*—No further information has been elicited.

11. *Narayan Das.*—No further information has been elicited.

The case is the same as that below.—See No. 15.

12. *Manohar Mahanta.*—No further information obtainable.

13. *Narayan Nawa.*—Report not received.

14. *Padai Ram.*— No further information obtainable.

15. *Narayan Das.*—This case is the same as No. 11.

E. G. RUSSELL, M.B., B.Sc.,

Surgeon-Lieutenant-Colonel,

Superintendent, Lunatic Asylum, Dacca.

BERHAMPORE LUNATIC ASYLUM (BENGAL).

(SUPERINTENDENT, DR. MEADOWS.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from the Superintendent, etc.
1. Surat Chandra Ghose; Kyasth; Zemindar,* Khulna; 17; No. 146. *Son of *muharrir* (further inquiry).	Ganja...	Toxic insanity.	Indifferent.	The medical certificate says that he is violent and dangerous and has lucid intervals. The *Descriptive Roll* shows that the insanity had lasted three months, that the patient was "addicted to ganja-smoking formerly and can smoke now if he gets it," that "ganja-smoking" is assigned as the cause, and that there is no history of epilepsy or heredity. Admitted, 6th January 1892. Discharged, 31st January 1893.	The case book shows that the lunatic says "that the cause of his becoming insane was that he took to religion and counting beads, and his beads were stolen." He improves from the time of admission, and is declared sane on 7th June 1892 and discharged on 31st January 1893.
2. Pitambar Singh; Rajput; Cultivator; Bhagalpur; 40; No. 150.	Ganja...	Mania ...	Bad ...	The medical certificate shows that "he never answers any questions though he sometimes makes sounds with his lips closed," and is filthy in his habits. The *Descriptive Roll* shows that he had been insane since October 1891, that he was "addicted to ganja-smoking previously," that the insanity was "possibly due to ganja-smoking," that there was no history of heredity, and that it was not known whether he had epilepsy. "It appears that he became insane and did not eat properly, and one day after sunrise, while his wife was seated in the verandah of the house, he came from behind and cut her in the right ear." He was "melancholic." Admitted, 17th March 1892. Died, 16th July 1892.	"Since admission he has been very filthy. * * Keeps on moaning, does not sleep at night, eats badly, * * refuses to answer any questions." He required forcible feeding by the nose in May and had suicidal tendency. He was admitted to hospital for diarrhœa on 28th June and died 15th July. The *post-mortem* showed death to be due to dysentery with infarctions in the lungs. The type is shown as "Mania."
3. Karanu Shaha; Hindu; Shopkeeper; Rangpur; 21; No. 151.	Ganja...	Toxic insanity.	Fair ...	The medical certificate shows that he "talked excitedly and irrelevantly, tore his clothes, threatened to strike others, dirty in his habits, voiding solid excreta in his clothes from 20th to 23rd February 1892. Has been quiet, rational, and even courteous since." The *Descriptive Roll* shows that he had been mischievous and violent, that he "is reported to have been insane for the last four years," that he was "apparently not" addicted to any intoxicant, and that "no cause is assigned except bâyu (vertigo?). "There is no history, heredity or epilepsy. His age is "20 or 21 years." Admitted, 19th March 1892.	The case book shows that he was admitted to the Asylum on 4th September 1889, "aged 17 years." He had been insane about eight months, and had been insane once before, but cured after five or six months; "violent and dangerous and not addicted to drugs." "The medical certificate says that he is suffering from acute mania with perfect intermissions of sanity." On 24th March 1891 he "appears sane; says that his sister said he had been made mad by *jadu*." In June 1891 he was discharged sane. He was re-admitted on 19th March 1892 "in fair health and physique, and appearing quiet and harmless." There was no improvement until 18th December 1893, when he is considered sane, but unfit for release.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from the Superintendent, etc.
3. Kuranu Shaha—*contd.*	Ganja...	Toxic insanity.	Fair.		In March 1894 the same opinion is expressed by Dr. Meadows. It is added: "He now states that he used to smoke ganja two and five times a day. There is nothing in the *Descriptive Roll* about his being addicted to ganja, however. * * * Judging from the history of the case, it is very probable that ganja is the real exciting cause of his recurrent attacks." This is the first mention of ganja. The entry in the descriptive roll regarding the man having been insane for four years had not been copied into the case book by Dr. Meadows' predecessor, Dr. Saunders. Had that been brought to Dr. Meadows' notice, he says it would have altered his opinion on this case.
4. Bihari Jolaha; Hindu; Labourer; Monghyr; 26; No. 157.	Ganja...	Toxic insanity.	Good...	The medical certificate of Dr. Moorhead says: "His appearance is that of a simple-minded man; wears a continuous smile." He refused to work in Jail and threatened the overseers. The *Descriptive Roll* says that he had been insane eight months. As to whether he took intoxicants it is said "Not known. Not in this Jail. He says he used to take ganja." He was sentenced to two years' imprisonment for theft on 18th March 1891, and became insane in Jail. The "circumstances and causes" leading to insanity are "not known; he has shown weakness of intellect from the time of his admission to Jail." There is no history of epilepsy or heredity. Admitted, 19th May 1892. Discharged, 3rd October 1893.	The case book says: "Dr. P. A. Rigby certifies that he has a vacant and dazed look and smiles in an idiotic manner when spoken to. Answers questions in a hesitating manner and with great effort to collect his thoughts. At other times quite at random. Has the general appearance of an idiot." "In the asylum he has a half-witted appearance, eats, drinks, and sleeps well. If interfered with assaults people." There is no improvement. He is finally made over to his father on security on 3rd October 1893.
5. Kanai Lall Dubé; Brahman; Beggar; Burdwan; 32; No. 158.	Ganja...	Toxic insanity.	Fair ...	The medical certificate shows that "his talk is violent, incessant, and incoherent. Has exalted ideas, imagining himself a dispossessed king. Has to be restrained forcibly at times from violence. His habits are dirty." His *Descriptive Roll* shows that it is not known how long he has been insane, nor whether there is any history of heredity or epilepsy. He had been "addicted to ganja for a long time," and "ganja" is assigned as the cause. Admitted, 28th May 1892.	The case book shows that on admission he was violent, dangerous, noisy, and very filthy, and eating and sleeping badly. No change in his mental condition until 13th October 1893, when it is noted "some mental improvement observed." There is no entry subsequent to this. On 13th June 1892 it is noted: "The Magistrate of Burdwan certifies that no relations could be found by the police."
6. Ramnarain; Hindu; Shopkeeper; Nuddea; 24; No. 161.	Ganja...	Toxic insanity.	Poor ...	The medical certificate says: "Does not reply to questions reasonably; always mutters himself indistinct words," and is dirty and destructive.	On admission he was quiet, dirty, and incoherent. "Takes his food well, but does not sleep at night." "Gives only his name and nothing more."

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from the Superintendent, etc.
6. Ramnarain;—*contd.*	Ganja...	Toxic insanity.	Poor.	The *Descriptive Roll* shows that he "is a waif and stray picked up on the road, and nothing is known of his antecedents, nor any information can be got from him." The Deputy Magistrate says: "the enquiring police officer reports that the lunatic has no friends nor relatives." Admitted, 18th June 1892.	On November 11th is this entry: "No improvement. Now states that he used to take large quantities of ganja." There is "no improvement" up to 18th February 1894, the date of the last entry made.
7. Hari Das; Hindu; none; Gya; 45; No. 162.	Ganja...	Mania ...	Bad ...	The medical certificate shows him to have been irrational, noisy, abusive, and dirty. The *Descriptive Roll* shows that nothing is known of his past history, but "it is believed that he has been addicted to ganja." There is also in the file copy of the following note, dated 23rd June 1892, of the District Superintendent of Police, Gya: "To Magistrate,—The head constable of Warisally, Gunge O. P., reports that he has inquired into the question asked by you. The villagers state that about 25 or 30 years ago Hari Das went off his head and was sent to the Patna Lunatic Asylum. He returned home on being discharged from the latter place, and never showed any signs of madness again." Admitted, 25th June 1892. Died, 2nd August 1892.	The case is entered as one of mania. He was "suffering from an advanced form of leprosy with loss of three toes of right foot and ulceration of big toe." On 19th July it is noted: "Admitted to hospital on 1st July. Is getting worse mentally and bodily." He died from the effects of leprosy, 2nd August 1892.
8. Kanta Dubé; Hindu; Durwan; Mirzapur; 32; No. 165.	Ganja...	Toxic insanity.	Indifferent.	The medical certificate shows that the man "has a wild maniacal look," and is noisy, incoherent, destructive, violent, and sleepless. The Magistrate adds that he is suicidal. The *Descriptive Roll* shows that he is an up-country man, and nothing is known of his past history. He had "formerly been addicted to ganja and bhang only," but "nothing" is assigned as the cause of insanity. There is also in the file a letter from the Magistrate of Mirzapur, saying that no relatives can be traced. Admitted, 16th August 1892. Died, 17th May 1893.	On admission it is recorded that the lunatic "says he eats beef, pig, and drinks spirits and smokes ganja." This is the only mention of ganja. There is no mental improvement until 11th February 1893, when this entry occurs: "Since 29th January has been in hospital; syphilitic eruption; slight mental improvement." On 12th April it is noted: "Gradually wasting away, evidently by phthisis." He died on 17th May 1893, and "the *post-mortem* shows phthisis and pericarditis."
9. Arjun Upadhya; Hindu; Constable; Chapra; 26; No. 166.	Bhang...	Toxic insanity.	Good...	The medical certificate says he is irrational and goes naked, and is "in the acute stage of mania at present." The *Descriptive Roll* shows that he became mad during leave in July 1892, and that it is "heard that last year he became insane, but cured;" that he is addicted to "ganja and bhang," which are assigned as causing the insanity. It is not known whether there is any history of heredity or epilepsy. Admitted, 28th August 1892. Discharged, 31st January 1893.	On admission he was violent, dangerous, dirty, sleepless, and restless, but "answers questions apparently rationally, and says that he went to enquire into the case of a Parsi who fell from a tree and killed himself, and that the ghost of the Parsi entered into him and made him mad." There is "slight mental improvement" in October, and in November it is noted: "Slight improvement, but still uncertain and easily excited if opposed." In January he was discharged as perfectly sane.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from the Superintendent, etc.
10. Mangal Sen; Chamar; Beggar; Aligarh; 60; No. 168.	Ganja...	Toxic insanity.	Good...	The medical certificate shows that the man was talkative with "a great" air, dirty but harmless. He "eats and drinks well, though his sleep is disturbed." The *Descriptive Roll* shows that he had been insane "ever since his admission" to Jail, that "he was addicted to ganja" and that "ganja-smoking" is assigned as the cause of insanity. There is no history of heredity or epilepsy. He was arrested for theft. Admitted, 5th September 1892. Discharged, 1st July 1893.	On admission he said "his home was at Aligarh, 7 *kos* from Hatwa; that he has taken ganja since he was a small boy; that about 12 years ago he was in Bareilly Lunatic Asylum for three months; that he was then charged with stealing rice. In October there was "no improvement." In November there was improvement, which continued until he was sent for trial on 1st May 1893. He did not return, and was written off on 1st July.
11. Purna Chandra Rishi; Hindu; Dealer in leather; Jessore; 42; No. 177.	Ganja...	Mania ...	Indifferent.	The medical certificate shows that he is "not rational in conversation, is dirty and neglectful of himself, cries and is complaining in nature, wanders about." The *Descriptive Roll* shows that he was insane from "last Asar" (June); that there is no history of heredity or epilepsy; that "he was addicted to ganja-smoking only;" that "the rumour is that his cousin Mahadeo Muchi gave him some intoxicating drugs to eat to make him mad;" and that he killed his aunt and wounded him mother "in a fit of anger." "All that is known is that the accused had been extremely suspicious of his wife's fidelity before he became insane, and that he had suspected her to be carrying on intrigue with his cousin Mahadeo Muchi." Admitted, 17th December 1892.	This is shown as a case of mania. On 29th December 1892 it is noted: "Since admission has been quiet and orderly. Is not irrational in conversation or habits. Has up to present showed no signs of insanity. He has never showed signs of insanity, and was sent for trial to Jessore on 21st July 1893. He was re-admitted under the authority of letter No. 699-J.D., dated 19th October 1893, from the Government of Bengal, on 13th November 1893, and since then has been perfectly sane. On 18th February 1894 it is noted: "Continues sane; denies that he ever smoked ganja or took bhang."

NOTE.—The total number of admissions in 1892 was—

Criminal	Males	...	22
	Females	...	3
Non-criminal	Males	...	11
	Females	...	8
	TOTAL	...	38

Of these, the above eleven cases were shown in Statement VII as due to hemp drugs, but of them only eight were shown in Statement VI as cases of toxic insanity. The other three were shown as "mania."

26th March 1894.

Report of the Superintendent regarding the Hemp Drug cases admitted into the Berhampore Lunatic Asylum during the year 1892.

1	2	3	4	5
Serial number.	Name, race, occupation, and age.	Special enquiry is now requested to be made in each case as to whether the alleged cause of insanity was *really due* to hemp drugs as reported.	Remarks.—Under this heading please state the authority for the original statement that indulgence in hemp drugs (ganja or bhang) was the cause of the insanity in each case, *e.g.*, was the information derived from the police or from the lunatic's friends after due inquiry or any other manner.	Report by the Superintendent of Asylum after careful enquiry into the previous history, aided by the results of local enquiries received from Magistrates.
1	Surat Chandra Ghose; Kyasth; Zamindar; Khulna, 17 years.	I see from the papers that the Civil Medical Officer states positively that the boy's madness was due to smoking ganja. He was a school-boy, the son of a muharrir in the munsifi's Court, and the Civil Medical Officer had, no doubt, opportunities of personal enquiry; now this Civil Medical Officer is dead and the muharrir has been transferred. But no doubt this is a true case of acute ganja mania. H. F. T. MAGUIRE, *Magistrate.*	It seems that the police had little to say to the case. The lunatic's own brother brought him to the police, and he was at once sent to the Magistrate.	There is no doubt whatever in my mind that this was a case of toxic insanity due to ganja-smoking. [NOTE.—The Magistrate does not appear to have read the papers carefully. The medical certificate contains no mention of ganja whatever. It is the *Descriptive Roll*, signed by a Magistrate, which contains reference to ganja.]
2	Pitambar Singh; Rajput; Cultivator; Bhagalpore; 40 years.	The lunatic Pitambar Singh was addicted to smoking ganja and drinking bhang, in which he indulged constantly. GOWHER ALI, *Sub-Divisional Officer.*	Tulsi Singh, the lunatic's brother, and Bigi Singh and Khoohi Singh, his brother's sons, state that the cause of the insanity was the indulgence in ganja and bhang. Subsequent to the admission into the asylum his younger brother Lahoori Singh has also become insane and is at present living in Bishunpur Kothia in Amarpur Thana.	I am of opinion that ganja was the cause of insanity in this case, but a study of the history of the case leads me to think the type of insanity was melancholia.
3	Karanu Shaha; Hindu; Shopkeeper; Rangpur; 21 years.	Enquiry has been made at Karanu Shaha's residence, Dhaperhat. As far as can be learnt, he was not addicted to ganja; he became suddenly insane at the age of 11 or 12. E. B. HARRIS, *Magistrate.*	I am unable to say upon what grounds it was reported that the lunatic was addicted to ganja. The report was given by the police of the Bogra district, where he was convicted. The Bogra police should be asked how they got the information.	The cause of insanity in this case is not clear. According to recent local enquiry he was not addicted to ganja, though the man himself stated he did smoke ganja. The type of insanity was from the history "mania."
4	Bihari Jolaha; Hindu; Labourer; Monghyr; 26 years.	I have visited the man's village to-day and seen his relations. They do not appear to give ganja-smoking as the cause of insanity. They assign no cause at all. The man was a ganja-smoker three or four years before becoming insane, but not to excess. There are no other cases of insanity in the family. H. WHEELER.	The statement that the lunatic used to take ganja was made by the lunatic himself and not verified by other evidence.	I am of opinion that this was a case of toxic insanity due to gana.

Report of the Superintendent regarding the Hemp Drug cases admitted into the Berhampore Lunatic Asylum during the year 1892.

1	2	3	4	5
Serial number.	Name, race, occupation, and age.	Special enquiry is now requested to be made in each case as to whether the alleged cause of insanity was *really due* to hemp drugs as reported.	Remarks.—Under this heading please state the authority for the original statement that indulgence in hemp drugs (ganja or bhang) was the cause of the insanity in each case, *e.g.*, was the information derived from the police or from the lunatic's friends after due inquiry or any other manner.	Report by the Superintendent of Asylum after careful enquiry into the previous history, aided by the results of local enquiries received from Magistrates.
5	Kanai Lall Dubé; Brahman; Beggar; Burdwan; 32 years.	The lunatic is an up-country man. He came to this district shortly before his arrest in an insane state. It cannot therefore be ascertained whether his insanity was really due to hemp drugs. His antecedents cannot be ascertained from any of the local people. W. H. VINCENT, *Officiating Magistrate.*	The Civil Surgeon reported ganja is the cause of the insanity (*vide Descriptive Roll* sent).	I am of opinion that this was a case of toxic insanity due to ganja-smoking. [NOTE.—The medical certificate contains no reference to ganja. The descriptive roll, signed by Civil Surgeon, does not say ganja is the cause, but that it is assigned as the cause of the insanity.]
6	Ramnarain; Hindu; Shopkeeper; Nuddea; 24 years.	Beyond giving his name and that of his father very indistinctly, the lunatic could give no information whatever regarding himself. He is a waif and was picked up in the Bangaljhi market, Thana Chapra, this district. No other information from the police or the shopkeepers or anybody could be obtained. It is therefore impossible to fill up columns 7 and 8 as requested. E. W. COLLEN, *Magistrate.*	.....	Local inquiry produced no further information in this case. From the previous history I think it is not improbable that the cause of insanity was ganja, and the type toxic insanity at first of a maniacal form running on to dementia. The man still states that he was in the habit of smoking ganja daily.
7	Hari Das Kurmi; Hindu; none; Gya; 45 years.	From inquiry made from the lunatic's son, Ram Charn Kurmi, and his relative, Jitun Kurmi, it appears that the real name of the lunatic was Dumree Kurmi, not Hari Das as stated. They say that the lunatic was addicted to the use of ganja for a long time; one pice to two pice worth of ganja the lunatic was in the habit of smoking every day. Most probably the smoking ganja was the cause of his insanity. JAGENDRA, *Sub-Inspector, Police.*	The informations were given by the lunatic's son, Ram Charn Kurmi, aged 19 years.	I am of opinion that this was a case of mania due to ganja-smoking. [NOTE.—A further report from the Sub-Divisional Magistrate of Nawadah is appended.]
8	Kanta Dubé; Hindu; Durwan; Mirzapur; 32 years.	I have made enquiries both in this district and Dinajpur and can get no information as to whether Kanta Dube was a ganja-smoker or not. E. B. HARRIS, *Magistrate.*	This information was given by police.	Cause of insanity doubtful; but very possibly ganja; type of insanity mania.

Report of the Superintendent regarding the Hemp Drug cases admitted into the Berhampore Lunatic Asylum during the year 1892.

1	2	3	4	5
Serial number.	Name, race, occupation, and age.	Special enquiry is now requested to be made in each case as to whether the alleged cause of insanity was *really due* to hemp drugs as reported.	Remarks.—Under this heading please state the authority for the original statement that indulgence in hemp drugs (ganja or bhang) was the cause of the insanity in each case, *e.g.*, was the information derived from the police or from the lunatic's friends after due inquiry or any other manner.	Report by the Superintendent of Asylum after careful enquiry into the previous history, aided by the results of local enquiries received from Magistrates.
9	Arjun Upadhya; Hindu; Constable; Chapra; 26 years.	I have examined Arjun Upadhya, who is now in a sane condition, and some of his relations and neighbours. All the witnesses agree in saying that Arjun never smoked or took ganja, bhang, or opium, or any other intoxicating drug. There is no history of insanity in the family. They cannot assign any cause for the insanity of Arjun; nor can the Civil Surgeon obtain any information from Arjun himself to show how he became mad. B. P. NEOGY, *Deputy Magistrate.* T. R. MACDONALD, *Civil Surgeon.*	Not known	I am of opinion that the *Descriptive Roll* was probably more correct than the evidence now produced, and that the man was addicted to ganja and bhang, and the case one of toxic insanity.
10	Mangal Sen; Chamar; Beggar; Aligarh; 60 years.	The Civil Medical Officer of the district kept the lunatic under his observation for a month and gave it as his opinion that the insanity was due to hemp drugs. R. CORNISH, *Magistrate.*	The lunatic was a wanderer and had no fixed abode. Had no friends with him. He himself stated before the Medical Officer that he was addicted to ganja-smoking.	I am of opinion this was a case of toxic insanity due to ganja-smoking. [NOTE.—The Medical Officer did not give the opinion now stated by the Magistrate. He simply entered: "He was in the habit of smoking ganja" as a fact indicating insanity communicated by others.]
11	Purna Chandra Rishi; Hindu; Dealer in leather; Jessore; 42 years.	From the police papers it appeared that Purna Rishi's insanity was due to ganja-smoking. But from the enquiry made by me I have come to learn that Purna suspected that his cousin Abhoy Rishi carried on an intrigue with his wife and that his mother and aunt (Abhoy's mother) abetted the intrigue. Purna brooded on this so much that he got a sort of mania, under the influence of which he killed his aunt and attempted to kill his mother. His relatives, in order to suppress this scandal, got up ganja-smoking as the cause of Purna's insanity. This view of the fact is strengthened by the fact that shortly before the murder Purna sent his wife to her father's house. Purna's wife has now disappeared traceless and his mother is dead. AMRITA LAL MOOKERJEE, *Sub-Divisional Officer.*	The information was derived from the police.	This case appears to have been one of mania, but there is certainly doubt as to the cause of his insanity, whether due to ganja or to suspicions as to his wife's fidelity, very possibly the latter. [NOTE.—An abstract of the criminal record in this case is appended.]

BERHAMPORE:
The 29th May 1892.

GORDON PRICE, M.D.,
Superintendent, Lunatic Asylum.

CASE NO. 7.

Copy of a letter No. 208 Crl., dated Nawadah, the 21st May 1894, from the Sub-Divisional Officer, Nawadah, to the Magistrate of Gya.

WITH reference to your Memo. No. 1051, dated the 4th May 1894, directing an enquiry to be made in regard to the cause of insanity of one Hari Das, lunatic, I have the honour to submit the following result of my enquiry about the matter.

2. I had sent for the relatives of the alleged lunatic at first, but it was reported that there were none alive among them in the village, so I had to send for a few of his next-door neighbours who appeared before me to-day and gave the following accounts of his habits. Their names are noted in the margin. They appear to be intelligent and reliable.

1. Sardari Koiri, aged 35 years.
2. Somer Koiri, aged 40 years.
3. Gango Sonar, aged 45 years.

3. They say that the lunatic Hari Das was formerly called Dhamri Dhanook and was by caste a Dhanook. His parents had died long before he became insane. He first became insane about 15 years ago and was sent to the lunatic asylum by name of Damri. He returned from the asylum on his recovery after two years' confinement, and lived at his native village for about 7 years in sound health and mind. During these seven years he passed for a *sadhu* and designated himself as Hari Das. It is also alleged that when residing at his village during this period of seven years, he once committed theft and was imprisoned for two years. On his return from the jail he returned to his house and again passed for a *sadhu* and lived on begging. It is about six years that they saw that he went with his younger son, Sheo Charn, to Sahibganj, Kajrote, in Bhagalpur, where the latter was married and that they heard nothing of him since then.

4. They state further that before Hari Das went mad, he used to smoke ganja only once a day, but on his return from the lunatic asylum he began to smoke twice a day, and that he never used bhang. They further state that the alleged lunatic Hari Das was not insane in reality, but that he pretended to be so in order to cover his misdoings. According to them, the use of hemp drugs was not the real cause of his insanity as he used them very moderately, neither was he subjected to any sad affliction, which might have been the cause of his insanity.

5. As stated above, his father died some 25 years ago; his mother died two years later, and his wife died some ten years ago; his first son, named Shankar Dhanook, was punished for theft, and it is not known where he is at present. It appears that Hari Das has been confined in the Lunatic Asylum for a second time and was sent there by the Magistrate of Bhagalpur.

6. The form annexed with your letter under reply is returned herewith.

Case No. 11.

The record in the Sessions case, Empress *vs.* Purna Chandra Rishi, has been perused. Seven witnesses speak to the madness of the prisoner since Asar; but not one mentions ganja or bhang. The prisoner's mother (whom he had wounded) said: "Purna's two sons had died before the occurrence. He also lost his son-in-law. Since Asar Purna had become like a mad man." His cousin (son of the woman he killed) said: "I cannot say why he became mad. He had two sons, one of whom died. He never had any son-in-law." No other witness was asked about the cause of insanity, and the Judge does not refer to it.

The Civil Surgeon of Jessore said: "I had the prisoner under observation for some time, and observed his mental condition during the time, and I came to the conclusion that he was a weak-minded and somewhat demented individual. He seemed perfectly harmless. But on hearing that he had committed such great crimes, I am of opinion that he is not harmless, and that he has probably temporary fits of mania." He said nothing about the cause of insanity.

CUTTACK LUNATIC ASYLUM.

(SUPERINTENDENT DR. ZORAB).

Hemp Drug case admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from the registers and by inquiry from the Superintendent, etc.
Bira Das; Hindu; Peon; Balasore; 41; No. 351.	Ganja..	Mania ...	...	This is a criminal lunatic. The Civil Surgeon of Balasore (Dr. Zorab) was examined before the Court on 10th February 1879. He said he had had Bira Das under observation and considered him of unsound mind and incapable of making his defence. The *Descriptive Roll* shows the duration of the attack as "about five months;" that "one of the ancestors of the lunatic was insane;" that the lunatic is not addicted to ganja or any intoxicant; that the cause is "hereditary;" and that he had "killed his mistress Hira by repeated blows on the head with a heavy salwood faggot." He had no history of epilepsy. The man was admitted into the asylum in March 1879 accordingly. He was discharged to stand his trial on 12th February 1892, and re-admitted on 6th May 1892. The papers then received with him include the judgment of Mr. Cornish, "Assistant Superintendent, Tributary Mahals." The judgment says: "In January last he (the prisoner) was declared capable of making his defence. Proceedings against him were therefore resumed. Such evidence as was procurable has been recorded; and a formal charge of murder has been drawn up. The accused pleads insanity and oblivion of what occurred. The act itself was scarcely that of a sane man. There is evidence to show that he has previously been obliged to leave the Raja's service on account of insanity. One at least of the witnesses who saw him a few hours after the murder considered him then insane. He has been detained in a Lunatic Asylum for some thirteen years. The presumption therefore is almost irresistible that when killing Hira he was incapable of knowing the nature of the act." There is nothing in the judgment as to the cause of insanity. There is no reference to ganja.	The case book shows that this man was admitted in March 1879. In April of that year there is this entry: "States that a Bairagi gave him ganja to drink and that he called him a second time, but because he did not go he made him insane." For years there are entries showing "irritability," "disposition uncertain," "sullen," and that the man has delusions of visions of Jaganath and visits of evil spirits. He was declared fit to take his trial in the beginning of 1892 and re-admitted after trial on 6th May 1892. His state remained much the same until 14th December 1893, when the visitors declared that he was "recovered" and must be "brought under provisions of paragraph 3 of Rules 'A, Recovered Criminal Lunatics,' *i.e.*, a period of four years should be spent in an Asylum before action is taken." It may be remarked that this rule only applies to cases where "the alleged cause is not ganja or other intoxicant." The registers show that the type was shown as "mania" from 1879 to 1887, as "toxic insanity" in 1888 and 1889, and again as "mania" from 1890 to 1894; and that the cause is *blank* from 1879 to 1886 and shown as ganja from 1887 to 1894. There is nothing to show why ganja was entered in 1887. The man, who is now sane, deposed before us as follows: "My father was not insane, but my grandfather was. I received ganja from a Bairagi and smoked it twice, morning and evening, for three of four days. I had never smoked ganja before. It made me senseless, and I forgot everything and killed Hira. I had left the Raja's service before I met the Bairagi. I had left the service because I was mad. Sunstroke and other things had destroyed my head and made me senseless, so I left. It was after that I met the Bairagi who gave me the ganja. It was a month or fortnight after leaving the Raja through madness that I met the Bairagi. I had not tasted ganja before I became mad first." Dr. Zorab is of opinion that ganja has no connection with the insanity in this case. This was his opinion when he first saw the case as Civil Surgeon of Balasore; and he has seen no cause in the subsequent history of the case to change his opinion.

NOTE.—The total number of admissions to this asylum in 1892 was:—

Criminal	Males	3
	Females	...
Non-criminal	Males	...
	Females	...
	TOTAL ...	3

Of these, one case,—(the above) was attributed to ganja smoking in Statement VII; but no case was shown under Toxic insanity in Statement VI.

28th February 1894.

TEZPUR (ASSAM) LUNATIC ASYLUM.

(SUPERINTENDENT, DR. MACNAMARA.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent, etc.
1. Uchit Ram; Hindu; Shopkeeper; Muzaffarpur; 35; No. 8.	Ganja...	Toxic insanity.	Indifferent.	This man was "sent up from the Binduguri Garden as an insane." There is no medical certificate. The *Descriptive Roll* shows that (9) "the lunatic sometimes smokes ganja and takes liquor;" that (10) "no cause can be ascertained" for the insanity; and that he has only delusions on religious subjects and is sometimes violent. There is no history of epilepsy or heredity. Admitted, 9th May 1892. Discharged, 22nd June 1893.	His condition did not alter in the Asylum; but, being harmless, the man was made over to his brother on 22nd June 1893. There is no mention of ganja as the cause by the Superintendent in the case book; but the Jamadar has entered ganja in the general register and case book heading.
2. Akhilananda Vishnavite; Beggar, Purulia; 33; No. 12.	Ganja...	Toxic insanity.	Good...	Dr. Mullane's medical certificate shows that this man "mutilated himself, cut off his penis. His manner is strange and wild, his answers incoherent. Refuses to do any work. He has lucid intervals." The *Descriptive Roll* shows that nothing is known of the cause of insanity or of the habits and previous history of the insane. Admitted, 24th June 1892.	There is no improvement until 1st March 1893. This improvement is continued up to date, but he is still insane. The Jamadar entered cause of insanity as "ganja-smoking" in the general register.
3. Jalim Ghatwai; Tea cooly; unknown; 20; No. 14.	Ganja...	Toxic insanity.	Good...	The medical certificate shows that "he talks nonsense. He climbed to the roof of the cell saying that he is in fear of people eating him. He says that the gods want to bite him." The *Descriptive Roll* shows: (7) the duration as about two months; that (8) "his father is a great ganja-smoker and sometimes shows signs of insanity"; that (9) "Jalim took to the use of ganja about two years ago, and I attribute his insanity greatly to this"; that (10) "I think the cause is ganja"; and (14) that "the change has been gradual." This is signed "Alek Campbell." Admitted, 15th July 1892. Discharged, 28th October 1892.	This man "has not shown any signs of insanity since admission"; and was made over to his mother's care. Nothwithstanding the above, the disease was entered as "melancholia" in the case book.
4. Saheb Ram Gowala; Tea cooly; Ranchi; 35; No. 15.	Ganja...	Toxic insanity.	Good...	Dr. Mullane's medical certificate shows that "he suffers from delusions of a dangerous character. His manner is wild and excited. His speech is quick and incoherent. His actions are aimless and purposeless." The *Descriptive Roll* shows that the man is "an agreement coolie"; that (9) he "smokes ganja," and that (10) his insanity is caused by "reading religious books." There is no history of epilepsy or heredity. Admitted, 7th August 1892. Escaped, 29th September 1892.	There was no improvement while in the Asylum. The case book shows the case as one of "acute mania." The Jamadar had entered the cause as ganja-smoking.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent, etc.
5. Jaganath; Hindu; Tea cooly; Dumka; 19; No. 17.	Ganja...	Toxic insanity.	Good...	Dr. Mullane's medical certificate shows that "his manner is wild and violent. He is very noisy and incoherent. He is subject to delusions." The *Descriptive Roll* shows the duration as three months, and that the man was "addicted to ganja," but the cause of insanity was "not known." It is "not known" whether the man was epileptic or had hereditary taint. Admitted, 14th September 1892. Discharged, 1st November 1893.	The case book shows the type as "acute mania." It shows that there was gradual improvement from the first until 1st October 1893, when the man was declared sane. The cause, "ganja," was entered by the Jamadar.
6. Khadu; Hindu; Tea cooly; Manbhum; 28; No. 19.	Ganja...	Toxic insanity.	Good...	Dr. Mullane certifies that he "refuses to answer questions, refuses to associate with his companions. Remains seated apparently without an object in the same spot for protracted periods at a time. In fact it is a marked case of melancholia." The *Descriptive Roll* shows that he had been insane for six months, that he says that he was "addicted to ganja and spirituous liquor"; that the cause of insanity is "not known." There is no history of heredity or epilepsy. Admitted, 27th September 1892. Died, 19th February 1894.	The case was entered as one of melancholia. The man remained without mental improvement, but in good health until September 1893, when his health began to break down, and he died on 19th February 1894. He died of anæmia. There was no *post-mortem*. The Jamadar entered the cause of insanity as ganja.
7. Kisto Das; Hindu; Beggar; Chittagong; 28; No. 20.	Ganja...	Toxic insanity.	Good...	Dr. Macnamara certifies that he "talks incoherently, sometimes goes naked, refuses food, laughs without cause, was filthy in his habits." He appears to have been taken up for creating a disturbance in the bazar. The *Descriptive Roll* shows the duration as four or five months, that he was "formerly" addicted to intoxicants, and that the cause of insanity is "smoking dhatura leaves with ganja." Nothing is known of his family history, or whether he had had epilepsy. Admitted, 15th October 1892.	His case is entered as "acute mania" in the case book, which shows that his mental condition did not change until 1st July 1893, when he "became noisy and violent, and attempted to commit suicide by hanging." He became quiet in November; but had fresh outbreaks of excitement on 1st February and 1st March 1894. The cause, ganja, is entered by the Overseer.
8. Chadi Gond; Tea cooly; Sarguja; 22; No. 23.	Ganja...	Toxic insanity.	Bad ...	Dr. Mullane certifies that "he is violent and noisy, labours under delusions, and has a tendency to homicide." The *Descriptive Roll* shows that "he used to smoke ganja and sometimes liquor," and that the cause of insanity is "not known." There is no history of heredity or epilepsy. Admitted, 15th November 1892.	His case is shown in the case book as "acute mania," but he was quiet "without improvement" until December 1893, when his mental condition was "much improved." On 1st February 1894 there were "no signs of insanity." The cause is entered as "ganja" by the Jamadar.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent, etc.
9. Bapu Ram; Hindu; Cultivator; Lakhimpur; 28; No. 26.	Ganja...	Toxic insanity.	Fair ...	Dr. Mullane certifies that he "refuses to give any account of himself, his speech is incoherent and contradictory. Is subject to sudden and unprovoked fits of violence." The *Descriptive Roll* shows duration as three months, that the man is "addicted to ganja only since before he became a lunatic," that the cause of insanity is "smoking ganja as far as is known," and that there is no history of epilepsy or heredity. Admitted, 2nd December 1892. Discharged, 27th April 1893.	The case was shown as "acute mania." The man was quieter after admission, slightly improved on 1st April 1893, and discharged on security on 27th idem. The cause, "ganja," was entered by the Jamadar.
10. Jagodhar; Brahman; Priest; Sibsagar; 22; No. 28.	Ganja...	Toxic insanity.	Indifferent.	Dr. Macleod certifies that he "talks incoherently, refuses to take food, attempts life of others." The *Descriptive Roll* shows him as "three years little insane; but insanity has increased since last Bhadro," that he "formerly used ganja, but left it afterwards; now also he smokes ganja if given by anybody; does not ask for it; does not use opium or wine;" that "it appears that the lunacy has arisen from reading the prohibited Shastras, but the real cause is not certain," and that there is no history of epilepsy or heredity. Admitted, 16th December 1892. Discharged, 11th November 1893.	The case is shown as acute mania. The man remained in the asylum without mental improvement until November 1893, when the state of his health necessitated his being sent to the Charitable Dispensary for medical treatment. He was placed in the "Moribund Ward" of the Dispensary (the Hospital Assistant there informed us), and died there of anæmia on 5th December 1893. The cause of insanity, "ganja," was entered by the Jamadar.
11. Mussammat Major Chamarin; Tea cooly; Raigarh; 30; No. 1.	Ganja...	Toxic insanity.	Good...	The Hospital Assistant, Sibsagar Jail, certifies: "Quarrelsome, unsound-minded, refractory, and sometimes becomes quite senseless to take care of her clothes in a fit of anger; but her habits were not dirty." The Civil Surgeon "countersigns" this. The *Descriptive Roll* shows duration as "about five months," and that the woman is "addicted now to ganja," but nothing is known of cause or past history. Admitted, 8th February 1892. Escaped, 4th February 1893.	The case is shown as acute mania. Her mental condition remained unaltered. She escaped on 5th November 1892, was recaptured on the following day, and escaped again on the 4th February 1893. The Jamadar entered the cause as ganja.
12. Mussamat Bedoma; Hindu; Tea cooly; Ganjam; 28; No. 2.	Ganja...	Toxic insanity.	Indifferent.	Medical certificate shows: "talks too much and incoherently, very dirty in her habits, uses filthy language towards the prisoners." It gives the disease as "chronic melancholia." The *Descriptive Roll* shows that nothing was known about the woman's personal history or habits, but that "her father was affected with insanity and tried to cut her throat." Admitted, 20th February 1892. Discharged, 1st October 1892.	The case is shown first as melancholia and then acute mania. Her mental condition remained unaltered until 1st October 1892, when she was sent to the Charitable Dispensary for medical treatment. The Jamadar entered the cause as ganja.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent, etc.
13. Mussamat Kitni Murani; Tea cooly; Ranchi; 21; No. 10.	Ganja...	Toxic insanity.	Bad ...	Dr. Mullane certifies that she "is silent and morose, refuses to answer questions, avoids company." The *Descriptive Roll* shows that nothing whatever is known about the cause of insanity or the woman's past history. Admitted, 15th November 1892. Discharged, 4th June 1893.	The case is shown as melancholia. The woman improved in mental condition and was sent to the Charitable Dispensary for medical treatment on 4th June 1893. She was not then sane. The Hospital Assistant at the Dispensary informed us that she had been placed in the "Moribund Ward" and died there of anæmia on 8th June 1893. The cause of insanity is shown in the case book as "unknown," but in the general register the word "ganja" has been written by the Jamadar over an erasure made in the column (11) showing cause.

NOTE.—The total number of admissions in 1892 was—

Criminal	Males	...	3
	Females	...	...
Non-criminal	Males	...	27
	Females	...	13
		TOTAL ...	43

Of these, eleven males and two females are shown in Statement VII as cases of insanity due to ganja, and in Statement VI as cases of toxic insanity. The register, however, shows the thirteen cases as ten males and three females.

14th March 1894.

Telegram, dated 20th May 1894.

From—Superintendent, Lunatic Asylum, Tezpur,

To—Secretary, Hemp Drugs Commission.

So far all District Magistrates declare inability to get information throwing light on thirteen ganja cases, 1892. I have nothing, therefore, to base opinion on.

Extract from the oral evidence of Surgeon-Major J. Mullane (Civil Surgeon, Dibrugarh) regarding some of the 1892 admissions to the Tezpur Asylum.

I cannot say what was the cause of insanity in the case of the woman Kitni, No. 13, sent up in 1892. I had not seen the descriptive roll before I dealt with the case. But now I see from it that nothing was known of the woman.

I remember the case of Akhilananda (No. 2) (1892) very well. It was suspected at the time that it was ganja. I heard about ganja at the time. But I had no positive evidence at the time as to whether he took ganja. He was a man difficult to get anything out of. He remained silent and morose. From this I rather disbelieved the account I got that he took ganja. In my opinion, the symptoms were inconsistent with ganja. On that account I disbelieved the statement made to me.

I do not remember the case of Chadi (No. 8) (1892). The noisy and violent character is consistent with ganja. I cannot now say whether the symptoms were typical.

I do not remember the case of Khadu (No. 6) (1892). But my certificate shows symptoms which are inconsistent with the ganja theory.

I remember the case of Jaganath (No. 5) (1892). I learned afterwards that the man suffered from epilepsy ; and his case is one of that variety of insanity which is associated with epilepsy. I ascertained that he had had epilepsy in the Jail. I remember I had heard that he used to take ganja ; but I had rejected that in certifying to his case. I did not think his symptoms consistent with the ganja theory. Besides, he had a curiously malformed head, and I associated his insanity with that. It is possible that the adjectives and expressions used in a brief certificate might be the same while expressing what would appear to the observer different symptoms. Thus, " noisy " and " delusions " might be used. But the character of the noise and of the delusions in ganja insanity are peculiar in themselves. All I had to certify was enough to show the man insane, so I did not go into detailed distinctions. All that is required is to leave no doubt in the Magistrate's mind that the man is insane. You would, of course, in such cases omit any doubtful matter.

I remember the case of Saheb Ram (No. 4) (1892). I knew the garden well, and got a full account of the case. It was a case of religious mania only, and there was no suspicion of ganja in the case. The symptoms were not consistent with ganja insanity. I do not think so.

I remember the case of Bapu Ram (No. 9) very distinctly. It had a very tragic ending. The man was discharged cured from this asylum, and cut off his wife's head a fortnight after. He was sent back. He was suffering from phthisis at the time, and whether he is alive or not I cannot say. I do not think ganja had anything whatever to do with his case. He had been a Head Constable in Sibsagar, and had been discharged for insanity many years ago. I formed no opinion as to the cause. He had a remarkably small brain development, and a curiously smiling expression constantly on the face.

BENARES LUNATIC ASYLUM (NORTH-WESTERN PROVINCES).

(SUPERINTENDENT, DR. O'BRIEN.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiries from Superintendent.
				CRIMINAL. MAGISTRATE'S I. A.	
1 Bhawanidin, son of Lachman; Hindu; Mali; Benares; 20.	Ganja	Toxic insanity.	Bad ...	1. In good health. 2. Toxic insanity, said to be due to ganja-smoking. Is harmless. 3. Duration of insanity, unknown, continuous since under observation. EVIDENCE, I. C. Has fits of insanity. Goes away from home and wanders about, throwing away his clothes, but not harming any one. When fit is over returns home. Mutters to himself at times. Stole a she-goat and a hooka while in a state of insanity. CIVIL SURGEON, I. B. Vacant, unintelligent expression, answers questions with difficulty and stupidly, neglects his person, and is very filthy.	No information to be got as to the grounds on which the Magistrate pronounced the insanity to be due to ganja-smoking. A jamadar at the Asylum speaks to the lunatic's ganja habit. The lunatic was admitted in November 1891, in anticipation of orders, and discharged in June 1892. The register records that he was dull and stupid, but at times excited, had fever after admission, quieted down and became sane, though liable to fits of excitement. This case was entered as one of toxic insanity on strength of Magistrate's summary. The papers connected with the lunatic's trial were obtained from the Magistrate's Court. They include depositions by lunatic's father and two neighbours. All three stated that he was not addicted to any intoxicating drug. There is nothing in the English papers to show why the Magistrate attributed insanity to ganja. The Commissioner, Mr. Finlay, informed us that the Magistrate, Barbudu Singh, was not very efficient.
				CRIMINAL. MAGISTRATE'S I. A.	
2. Ramdas; Hindu; Thakor; Cultivator, Benares (no fixed residence); 20.	Ganja	Toxic insanity.	Good...	1. In good health. 2. Toxic insanity, dangerous to others, caused by ganja-smoking. 3. Duration unknown, continuous since admission. EVIDENCE, I. C. Snatched a "dhusa" (shawl) from a person, was pursued and arrested. CIVIL SURGEON, I. B. Has unsettled, excited expression, talks perpetually in an excited manner, and is full of delusions and confused ideas, neglects his person, does not sleep, and is very noisy at all times.	He was in the Asylum from January 1892, though formally admitted in April and discharged in August 1893. For the first 3 months was excited then quieted down and became to all intents and purposes sane. He was always complaining that he had taken an overdose of ganja when he was unaccustomed to it, and had suffered many months' detention in consequence. The type of insanity was given on the Magistrate's summary, and not on Superintendent's observation.
				NON-CRIMINAL. MAGISTRATE'S ORDER.	
3. Bhagwoti Pershad; Hindu; Kayasth; Mirzapur; 25.	Ganja	Toxic insanity.	Fairly good.	Threw himself into a well to have a bath. Not dangerous. Excessive ganja-smoking. No other cause known.	Admitted in April 1892 and still in the Asylum. Has improved in health and decency and cleanliness, and is now apathetic. Type of insanity based on Civil

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiries from Superintendent.
3. Bhagwoti Pershad—*contd.*	Ganja	Toxic insanity.	Fairly good.	CIVIL SURGEON'S CERTIFICATE. Quiet and apparently rational, but wanders when talked to. Imagines himself to be in communication with "*Paris.*" Silly and obscene in his language when excited, of dirty habits, shameless. Addicted to ganja-smoking.	Surgeon's certificate. Superintendent regards the case as one of melancholia and not toxic. Lunatic himself attributes loss of reason to ganja, which he was warned against, and abstained from until over-persuaded.
4. Ramlal; Hindu; Bhimja (grain-parcher); Mirzapur; 24.	Bhang, Ganja.	Toxic insanity.	Good...	NON-CRIMINAL. MAGISTRATE'S ORDER. The present attack, which is the first, began six months back and has been continuous. Cause unknown. Runs after people to beat them, is troublesome to his family, has suicidal tendency, and is dangerous to others. No relatives insane. CIVIL SURGEON'S CERTIFICATE. Wanders when talked to. Quarrelsome without reason. Has a wild look. Is at times violent and noisy. Probably addicted to bhang and ganja.	Admitted in May and handed over to his friends in June 1892. Noted on 25th May that he has improved and is sane, and that his insanity was, no doubt, due to bhang. It is probable that the duration of the attack previous to admission was due to repeated doses of bhang.
5. Hinganlal; Hindu; Brahman; Mirzapur; 22.	Bhang, Ganja.	Toxic insanity.	Fairly good.	NON-CRIMINAL. MAGISTRATE'S ORDER. Had attack of nine months' duration when he was 14 years old. This is the second, and has been continuous. Cause unknown. Runs after people to beat them, and is abusive, suicidal, and dangerous. No relatives insane. CIVIL SURGEON'S CERTIFICATE. Talks rapidly and irrationally, is disputatious on religious subjects, and occasionally obscene. Somewhat violent and wild in appearance. Covers his body with ashes like a jogi, apparently addicted to bhang and ganja.	Admitted May and discharged September 1892. A note dated 17 days after admission states that he was violently excited on admission, but has much improved, though still dull at times. A little later he is described as having an intelligent expression and talking rationally. Improvement unchecked till discharged. Type of insanity is based on Civil Surgeon's certificate.
6. Ram Smair Misar; Hindu; Brahman; Benares, 22.	Bhang	Toxic insanity.	Good...	CRIMINAL. MAGISTRATE'S I. A. 1. In good health. 2. Dangerous mania, cause unknown. 3. Duration unknown. EVIDENCE, I. C. Caught with 3 brass utensils, which he had stolen from the house of one Bharah Misar.	Admitted January and discharged on security June 1892. Was excited and showed symptoms described in last column till about April 5th. Since then improved in health and mental condition and became to all intents and purposes sane. The Asylum jamadar informed us that lunatic's relations stated that this was not the only festival which had caused him to lose h's head. Ganja-smoking has no connection with this case.

Hemp Drug cases admitted in 1892—concld.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history, and facts ascertained from registers and from enquiries from Superintendent.
Ram Samair Misar—*contd.*	Bhang.	Toxic insanity.	Good.	CIVIL SURGEON, I. B. Had a dull stupid expression, neglects and exposes his person, answers irrationally, mutters and is sleepless. Pencil note, by whom is not apparent :—From history of the case insanity was due to bhang. At the *Dassera* Ram Smair is in the habit of taking a prominent part in the rescue of Sita by Rama, and at such times he indulges in *bhang*.	Hearing that the lunatic's family lived near Benares enquiries were made for them. It was ascertained that Ram Smair had been enlisted, and that his people were out of reach.

NOTE.—The total number of admissions in 1892 was—

Criminal ...	Males	...	16
	Females	...	0
Non-criminal	Males	...	25
	Females	...	6
	Total ...	...	47

Of these, the above six cases were attributed in Statement VII to hemp drugs.

Report by Surgeon-Major Sweeney, Superintendent, Benares Asylum on the Hemp Drug cases of 1892.

I have the honour now to enclose the result of the local enquiries held by the Magistrates and Civil Surgeons into the cases of the six lunatics selected from the asylum for enquiry, and whose insanity was attributed to the use of Indian hemp in one or other of its forms.

Of the six no trace could be found of Nos. 1 and 2, by name Bhawanidin and Ram Das, and consequently no enquiries could be made regarding them; but the remaining four cases have been duly enquired into and the results are forwarded herewith. As regards No. 3, by name Bhagwoti Pershad. In this case there is no reason to doubt that ganja and bhang are responsible for the insanity. The evidence of the uncle, Madho Pershad, and of Josodanund, showed that Bhagwoti Pershad was addicted to the *excessive* use of ganja and bhang, and in the absence of all trace of heredity or of any other probable exciting cause, it is reasonable to assume that his malady was caused as stated.

No. 3, Bhagwoti Pershad.

No. 4, by name Ramlal.—The evidence in this case shows that Ramlal, although not using either ganja or charas, was in the habit of consuming a considerable amount of bhang. I am informed that half a tola of bhang is, except in the case of habitual excessive consumers, a large quantity and capable of producing decided intoxication. In this case also no heredity can be shown, and no probable exciting cause of insanity, excepting the regular drinking of bhang.

No. 4, Ramlal.

No. 5, Hinganlal.—This case bears witness unmistakeably to the effects of bhang. Commencing at the age of 10 years to take one tola of bhang twice daily, which is a very considerable amount, its consumption culminated on two occasions in insanity, which got cured on the stoppage of the drug and recurred on its resumption. Here also no heredity or predisposing cause can be found, and the natural conclusion comes to us that bhang was the exciting cause.

No. 5, Hinganlal.

No. 6, Ram Smair.—In this case the chain of connection is not as strong as in the others, though the evidence shows that he used to drink bhang occasionally, and the witness No. 3 named Birchu shows that Ram Smair was very intoxicated the day before he disappeared, and that the intoxication was such as would have been caused by bhang. In this case one should remember the great reluctance of any native, especially when any formal enquiry is on foot, to admit consuming anything to excess owing to fear of possible ulterior punishment. It is quite possible that in the case of a student, as this man was, even a single overdose following on even moderate use of the drug, might have produced mental disturbance. I have on innumerable occasions had men sent for observation and report who were in a state of violent maniacal excitement, which lasted from 8 to 12 days from what they described to be a single indulgence in the use of the drug.

No. 6, Ram Smair.

In returning the series of questions circulated to witnesses, I have the honour to point out that I have only just taken over charge of the Asylum, and am not thoroughly conversant with the subject. I therefore only answer such questions as have come within my knowledge as Civil Surgeon in the North-West Provinces.

From—The Joint Magistrate, Benares,

To—The District Magistrate, Benares.

I have the honour to forward the result of my inquiry in accordance with your orders of 24th November last. The report has been delayed as, being in charge of the city, I was unable to leave head-quarters. Of the three persons whose insanity is said to have been caused by the use of drugs, only one can be found.

Ramdas Thakur is a wandering mendicant with no family and fixed abode. I have not been able to find any trace either of him or of any of his relatives. Bhawanidin is also

not to be found. His mother states that he was kidnapped by a recruiter of emigrants. She denies that he ever consumed drugs at all, and I cannot find out on what ground the Magistrate stated that insanity was caused by ganja-smoking. Perhaps the Superintendent of the Asylum can obtain some information on this point.

3. *Local enquiry as to the cause of insanity of Bhagwoti Pershad.*

Madhopershad, son of Sunder Lal, caste Kayast, present resident of Welleslyganj, occupation service, aged 28 years, on oath, states that Bhagwoti Pershad, the insane, is my nephew. Since he attained the age of 14 or 15 years he used to smoke 4 or 5 pice worth *ganja* every day, and often he was also in the habit of taking *bhang* and black pepper. It is about two years past he has turned insane. No member of our family or anybody in the family of Bhagwoti Pershad's mother's side had ever insanity. I know not how Bhagwoti Pershad turned insane. When he was attacked with the malady I was not with him, and so I can't say what signs of insanity he had then.

Jasodanand, son of Daljit Pershad, caste Kayast, at present residing at Welleslyganj former resident of Akorhi, occupation service, aged about 45 years, on oath, states that, Bhagwoti Pershad is my son. It is over two years Bhagwoti Pershad has turned insane; he was in the habit of smoking *ganja* 5 or 6 *chilams*, 4 or 5 pice worth, daily, and used often *bhang* as well. Since he attained the age of 14 or 15 years he used to smoke *ganja*. Some four or five months prior to his insanity his mind was not well, his appetite and memory was also becoming loose gradually, and then all of a sudden he turned mad. Now he is in the Benares Lunatic Asylum. I hear that he is recovering. None of my or my father-in-law's family had insanity. It appears that, owing to his excessive use of *ganja* and *bhang*, his memory turned unsound, and there is no other reason of his insanity.

Shadi Lal, chowkidar, son of Bipat, caste Pasi, inhabitant of Mouza Akorhi, occupation service, aged about 32 years, on oath, states that it is over two years Bhagwoti Pershad turned insane. I do not know the cause of his insanity, but I know that he was addicted to *ganja* and used often *bhang* as well. None in the family of Bhagwoti Pershad had ever insanity. Bhagwoti Pershad was not in the habit of taking liquor.

OPINION.

Bhagwoti Pershad is in the Lunatic Asylum. I sent Madho Pershad, his uncle, to the Assistant Surgeon in charge of Sadar, and both of us had a consultation regarding the cause of insanity of Bhagwoti Pershad. After that I proceeded on to the spot and had a local enquiry in the matter. Depositions of a few witnesses who are acquainted with the matter recorded, which are herewith submitted. From the enquiry I am of opinion that the cause of Bhagwoti Pershad's insanity is owing to his excessive use of *ganja* and *bhang*. The opinion of the Assistant Surgeon is also herewith annexed.

CAMP AKORHI; GANGA NARAIN,

Dated the 20th November 1893. *Deputy Magistrate, Mirzapur.*

Statement made by Lalla Madho Ram, late Girdawal of His Highness the Maharajah of Benares at Kachowa.

Name.—Bhagwoti Pershad.
Father's name.—Jasodanundun.
Caste.—Kayast.
Residence.—Welleslyganj, Mirzapur.
Age.—25.

Lalla Madho Ram is the uncle of the insane Bhagwoti Pershad. He remembers that his nephew was addicted to the habit of smoking *ganja* since he was a boy of 14 or 15 years old. He has seen him often to drink the mixture of *bhang* leaves and black-pepper. Although his nephew was using regularly different preparations of Indian hemp, still he continued to remain in good health till he had the attack of insanity. He was not with his

nephew when he was insane, so he cannot give the full particulars and symptoms of his nephew's illness. His nephew has been sent to the Lunatic Asylum at Benares about 18 months ago and where he is still at present. He has been told that his nephew is almost cured now, and he will soon go to Benares to get his release from the Asylum. He cannot remember that any other member of his family had the same or allied disease before or at present.

Remarks.—This case also proves that owing to the continuous use of *ganja* and *bhang*, Bhagwoti Pershad became insane. He is still at the Benares Lunatic Asylum; and as he is reported to be well now, he will be able to furnish his own history of his illness if enquired there.

MANMATHA NATH BASU,

Assistant Surgeon.

---

4. Local enquiry as to the cause of insanity of Ramlal.

Ramlal, son of Sheo Narain, caste Bhouja, of Ahrora, aged 22 years, occupation Bhouja, on oath, states that I became insane some 23 months ago and was in unconscious state for a period of two or three months. I do not know the cause of my insanity. I never smoked ganja or charas, but that two years previous to my becoming insane I used to take one tola, worth ½ pice, bhang once every day in the evening time. I am not aware whether my grandfather was ever insane, but that my father was never afflicted with this malady or my mother or maternal grandparents. That when I became insane neither had the second stage of my matrimonial ceremony been performed, nor had I ever visited my wife. I was admitted into the Benares Lunatic Asylum. I am neither insane nor do I take bhang now. Since I have come out of the Asylum I am all right, and since then I have never been re-attacked with the malady. I used to smoke tobacco also. My memory and appetite began to fail me four or five months previous to my insanity, and I became confounded.

GANGA NARAIN.

Chhedi, son of Sheo Narain, caste Bhouja, of Ahrora, aged 26 years, occupation Bhouja, on oath, states that Ramlal is my brother. I do not know the cause of Ramlal's insanity. It was 23 or 24 months ago that he become insane. His mind seemed to have been in disorder some two or four months before he became absolutely insane, and his appetite also began to fail him. He was not in the habit of smoking ganja or charas, but he used to take one tola bhang once every evening. I have never seen my grandfather, and so I am not in a position to say if he was ever insane. My father, Sheo Narain, died some three years ago and had never been afflicted with insanity. He used to take a little liquor, but never took bhang. I myself never took bhang, but used tobacco; neither my mother nor her parents had ever insanity.

GANGA NARAIN.

Fakiran, son of Bandhu, caste Sheik, of Mohalla Bazargunj, aged 86 years, occupation service, on oath, states that I am the Karunda of Nil Hasan, Bandi Bibi zemindar, and live at Ahrora since nearly 40 years, where Ramlal lives also. Ramlal is a ryot of my master I know not how Ramlal became insane. Ramlal used to take bhang every day worth half a pice. He turned himself insane all of a sudden. His father, Sheo Narain, never used bhang, but was in the habit of taking a little liquor.

GANGA NARAIN.

Mathura, son of Gouri, caste Bhouja, of Ahrora, aged 25 years, occupation Bhouja, on oath, states that Ramlal is the son of my father's sister. I do not know the cause of his insanity. His mother, Mussammat Dokhni, was never insane, nor Chakori, my paternal grandfather and Ramlal's maternal grandfather. I do not know whether Chakori ever took liquor or bhang. My father died before him. Ramlal used to take a little bhang since last two or three years.

GANGA NARAIN.

Bharos, son of Ram Dihal, caste Chamar, of Ahrora, age 27 years, occupation service, on oath, states that Ramlal lives in my beat. I do not know how Ramlal became insane. All of a sudden he turned insane. Ramlal did not smoke ganja or charas, but used to take one tola bhang every day in the evening time. I saw his father, Sheo Narain, who never used to take bhang or turned insane.

GANGA NARAIN.

OPINION.

I sent Ramtal to the Civil Surgeon and had a consultation with him as well regarding the cause of insanity of Ramlal. After that I proceeded on to the spot and had a local enquiry in the matter. Depositions of Ramlal and a few witnesses acquainted with the cause of insanity of Ramlal recorded, which are also herewith submitted. From the enquiry I am of opinion that cause of Ramlal's insanity is owing to his excessive use of bhang. The opinion of the Civil Surgeon is herewith annexed.

CAMP AHRORA;
The 16th January 1894.

GANGA NARAIN,
Deputy Magistrate, Mirzapur.

Ramlal, aged 22.
Father's name.—Shibi Narain.
Caste.—Bhouja.
Residence.—Ahrora.

Two years previous to his admission to the Lunatic Asylum he had been in the habit of daily taking bhang once in evening time in cold infusion ½ tola daily. Four months previous to his being insane his memory began to fail—also his appetite—evidently the habit is taken to prevent hunger. The body, as in opium-eaters, emaciates usually.

This man's insanity was undoubtedly directly attributable to the excessive and habitual use of bhang. Since his recovery and return home the man has never taken to its use and has never had another attack and is in fair health, and, as he says, his health now is infinitely better than when he was addicted to the habit. I have had several cases during my residence here under me sent to the cells as raving lunatics which I have recognized as toxic insanity due to bhang and have never sent to a Lunatic Asylum. They have all recovered and been released. Their history has always been carefully enquired into by me.

H. E. DRAKE-BROCKMAN, F.R.C.S.,
Civil Surgeon.

5. Local enquiry as to the cause of insanity of Hinganlal.

Hinganlal, son of Summi, caste Brahman Panda, inhabitant of Bindhiachal, occupation Pandai, aged about 25 years, on oath, states that it is about 16 or 17 months past I turned insane; for four months I was not in my sense then. I do not know the cause of my insanity. I used to take bhang worth half a pice and ¼th pice worth of black pepper twice a day, since I attained the age of 10 or 11 years. At the age of 14 or 15 years once more I turned insane for five or six months. I do not know the cause of my insanity, how I was recovered from the malady, or by whom treated. Then, when I recovered, for nearly four or five months I did not use bhang. After that again I began to use the similar quantity of bhang and black pepper and turned again insane. Before I turned insane last time I lost my memory and appetite, and could not sleep soundly and did not feel well in the mind. For four months I was in the Lunatic Asylum. I have not been married as yet. Since I have come out of the Asylum I do not take bhang or any other intoxicating drugs, but scarcely when my associates press me of course then I take a little bhang. Since a month previous to my becoming insane the last time I did not feel well. None of my family of either sides had ever this malady. I never used ganja and charas.

GANGA NARAIN.

Summi, son of Madho Ram, caste Brahman Panda, inhabitant of Bindhiachal, occupation Pandai, aged 85 years, on oath, states that Hingan is my son: nearly 16, 17, or 18 months past he turned insane and continued in that state for four months. He became insane in the month of *Bhador* of the last year, and was in the Benares Lunatic Asylum. When Hingan was 10 years old he used to take one tola bhang and ½ pice worth black

pepper twice daily. When he became 14 years old for four or five months he turned insane, and recovered from the malady through the treatment of country physicians. I too used to take bhang about one kori in measure every day for 40 years, and have discontinued now. Neither I myself, anybody in my family, nor any member in my father-in-law's family ever turned insane. When in the last time Hingan turned insane, he was also then in the habit of using bhang. One or one and a half months previous to his insanity his mind was not well. I do not know how Hingan turned insane.

GANGA NARAIN.

Abdul Majid Khan, son of Shukulla Khan, caste Pathan, of Bindhiachal, aged 28 years, occupation service (municipal chowkidar), on oath, states that I do not know how Hinganlal became insane. He turned insane all of a sudden. Hinganlal was in the habit of taking one tola bhang daily. Neither Hingan's father nor any of his relatives ever had insanity.

GANGA NARAIN.

OPINION.

I sent Hinganlal to the Assistant Surgeon in charge of the Sadar to find out the cause of his insanity, and had also a consultation with him. After that I proceeded on to the spot and had a local enquiry in the matter. Depositions of Hinganlal and a few witnesses who are acquainted with the cause of his insanity recorded, which are also herewith submitted. From the enquiry I am of opinion that the cause of Hingan's insanity is owing to his excessive use of bhang. The opinion of the Assistant Surgeon is also herewith enclosed.

CAMP BINDIACHAL;
The 15th November 1893.

GANGA NARAIN,
Deputy Magistrate, Mirzapur.

Statement of Hingan, Brahman, a discharge inmate of Benares Lunatic Asylum.

Name.—Hingan.
Father's name.—Bindun.
Caste.—Brahman, Hindu.
Residence.—Bindiachal, Mirzapur.
Age.—25.

Since he was a boy of 10 years old he was in the habit of taking once daily a mixture containing half pice worth of bhang leaves (pounded or made into a paste at first) and quarter pice worth of black pepper. This he continued to take without any apparent ill-heath. At his fourteenth year somehow or other he had a fit of insanity, but he cannot state at present how he became insane at that time and how long he suffered from disorder of mind. He thinks he was insane for six months, but he does not remember whether he was treated in any Asylum or he was treated in his own house. He remembers at present that after he was thoroughly well at that time, he did not use bhang for at least four months, and after that period he again regularly took bhang till he had a second attack of the disease. Last year in the Hindustani month of *Chait* he had a relapse. He cannot state at present what led to this second attack. He remembers that he could not sleep for days, had no appetite, and his mind was very much excited before he had the recurrence of insanity. He cannot at present recall to his mind what he did and what occurred to him during the period he was insane. He says that when he was cured he found that he was confined in a place which he afterwards came to learn to be the Lunatic Asylum of Benares. No other member of his family had this disease.

He has left off the habit of regularly taking bhang since his discharge from the Asylum, but now and then he takes bhang mixture when compelled by his friends. He seems to be thoroughly sane at present.

REMARKS.

This case conclusively proves that hemp leaves which Hingan Brahman used to take regularly was the cause of the two attacks of insanity of which he was a victim. If Hingan again contracts his old vice, then it is probable that he might again get relapse of insanity.

MANMATHA NATH BASU,
Assistant Surgeon.

6. Ram Samair.

Ram Smair I succeeded in finding. He is now in his right senses. I append statements made by him and also by other persons likely to have an intimate knowledge of him. From these statements it appears that Ram Smair never indulged in *ganja*, but that he occasionally took *bhang* in moderate quantities. It does not appear that this was really the cause of his becoming insane, though possibly insanity may have been hastened by an overdose of the drug.

Ram Smair states:—I am all right now. I remained for two months in the Asylum and then got well. I left the Asylum 6½ months ago, and since then I have had no return of insanity. I was a consumer of bhang before I went into the Asylum. I consumed bhang for five or six months. I did not consume it every day, perhaps once in 7 or 8 days. I did not consume it to excess, but just as any one else does. I have no recollection of how I came to commit theft. I was quite out of my senses for two months. I had not indulged in bhang to any excessive extent before I lost my senses. It was not owing to the bhang that I lost my senses. I was affected by a disease which is known as "thai." It was this that made me insane. I was affected this way once before. It was about the time of the *Dasehra* that I first began to lose my senses. I did not indulge in bhang to any excessive extent in the *Dasehra*. I have never smoked ganja.

Ram Das Misser.—Ram Smair is my brother; he is younger than I am. He only drank bhang occasionally. He was not a daily or a habitual consumer. Numbers of people drink bhang, and Ram Smair drank it just as other people do. I never drink bhang myself. Ram Smair is engaged in the ceremonies at the *Ram Lila*. Ram Smair did not engage in any excessive consumption at the time of the *Ram Lila*. The first time he became insane was about a year ago. He got well in a month or two. When Ram Smair was arrested for theft he went to Benares to read; he was alright; he was arrested there. I don't know the circumstances as I was not there. Ram Smair read with Sama Churn and Mahabir. Sama Churn lives in Nai Basti. It was owing to illness that Ram Smair became insane. He took very little bhang: that was not the reason of his insanity. He never smoked ganja; he is a Brahman, and is not allowed by the rules of his caste to smoke ganja.

Raj Narain, Kayast.—I am zamindar of the village in which Ram Smair lives. I have known him for a long time; he is one of my tenants. He is an exceedingly respectable man, and belongs to a most respectable family. Ram Smair used to take bhang now and then in an ordinary way, just as other people take it. He never consumed it to excess. That was not the cause of his madness. He became insane from illness. In Benares all the Pandas and Brahmans and Mahajans are consumers of bhang. There is no popular feeling against taking it. Just as other respectable men take bhang so Ram Smair used to take it. Ram Smair was reading with Mahabir at Benares when he went mad; he ran away from there; he wandered about for many days; he threw away his sacred thread, and committed many other acts of madness. I don't know how he came to be arrested. I have never heard of any one going mad from the use of bhang. It is considered like tobacco; but excessive use produces intoxication; it never produces permanent insanity.

Berchi, Brahman.—I know Ram Smair. I read with him at Benares. One day Ram Smair did not appear for the reading, and then I learnt that he had gone mad. I learnt it one or two months afterwards. He disappeared for one or two months, and then it came to my knowledge that he had gone mad and had been sent to the madhouse. When Ram Smair was reading with me, I saw him every day. Occasionally he used to take a little bhang. I can't say whether he was an excessive consumer or not. He never took enough to make him quite senseless, though he was intoxicated. I can't say what was the cause of his madness—whether it was bhang or some other cause. The day before he disappeared he appeared to be intoxicated. He was very intoxicated. The intoxication was like the intoxication produced by bhang.

Mahabir.—I know Ram Smair; he used sometimes to read with me. I was not in Benares when he was arrested. I was at Jaunpur, and when I came back I heard that he had gone mad. I can't say why he went mad. I don't know whether he consumed any intoxicating drug or not.

AGRA LUNATIC ASYLUM.

(SUPERINTENDENT, SURGEON-LIEUTENANT-COLONEL WILLCOCKS.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent, &c.
1. Ram Lal; Brahman; Cultivator; Etah; 30; No. 168.	Charas	Mania ...	Good...	The papers show that the insanity is "attributed to indulgence in charas and bhang," that the patient is not subject to epilepsy, and that no member of his family is insane. He is suicidal and dangerous. This is his first attack, duration two months. He is described as incoherent and of filthy habits and laughs and grins, hums and makes noises to himself. Admitted, 28th January 1892. Discharged cured, 12th September 1892.	The register shows the cause as "not known." This entry is made in Dr. O'Brien's handwritting (then officiating Superintendent). On 1st February he "answers questions quite rationally, no tendency to wander." On 10th August he is "so much improved as to be now fit for discharge." These are the only two entries. Apparently Dr. O'Brien did not regard this as a hemp drugs case.
2. Motilal; Hindu; Ironmonger; Farakabad; 28; No. 176.	Bhang	Mania ...	Good...	This is a second attack and has lasted three months. It is attributed to the "use of bhang and dhatura." "Twenty or twenty-two years ago the lunatic's father and uncle were affected with insanity." He is dangerous, but not suicidal. There is no entry about epilepsy. The medical certificate shows "constant excitement, talking incessantly and incoherently, tearing up his garments, singing, wild and excited appearance, and sleeplessness and filthy habits." Admitted, 29th April 1892. Discharged cured, 12th September 1892.	The register omits all reference to dhatura. The entry was made by a Deputy Superintendent, now pensioned. The omission of dhatura is apparently a slip. On 10th August he "appears to be much improved. Slightly excited when speaking." On looking up the papers for 1889 we find that Motilal was admitted on 15th June 1889 for mania attributed to "ganja" (though the magisterial papers said "bhang"). He was discharged on 10th November 1889. The family history of insanity is clearly brought out in the Magistrate's papers, but is not referred to in the Asylum register. There is no heading for such an entry.
3. Gopal; Brahman; Labourer; Jhansi; 25; No. 178.	Ganja	Toxic insanity.	Good...	This man "has been subject to insanity for the last ten years." He "has been addicted to smoking ganja for the last ten years." There is no history of epilepsy or of insanity in the family. He is suicidal, but not dangerous to others except members of his own family. He is "subject to hallucinations, especially on religious matters." Admitted, 22nd May 1892.	In the register the cause is shown as "intoxicants (ganja)?" On 11th August he is "very passionate and quarrelsome, beat a warder when much excited on 14th June. Also excited on 20th June; he tore his clothes and beat his head against the ground." "On 3rd December he was excited for three days and again for two days in January. He is very easily angered, passionate, quarrelsome, and excited. Excited especially on 3rd March for three days, talks nonsense and is very independent. Never sensible, works in cleaning party." This entry was made on 21st November 1893.
4. Jugla; Brahman; Labourer; Aligarh; 25; No. 179.	Charas	Toxic insanity.	Bad ...	This is his third attack and has lasted five months. His insanity is "attributed to over-indulgence in charas." He is not subject to epilepsy and has no history of insanity in his family. He is suicidal and dangerous. "He is quite incapable of looking after himself. He sings and mutters incoherently. Filthy habits. He has the appearance and habits of a poor harmless and infirm lunatic. He wanders about aimlessly, harmlessly, muttering." Admitted, 5th June 1892. Discharged cured, 13th February 1893.	The man has not been in this Asylum before. On 11th August he "talks nonsense. Habits dirty, excited on 21st July." The next entry is 10th February 1893, "He has steadily improved and is reported to be quite sane since the beginning of December. He has been quite harmless from the first, and as his insanity was due to charas, he may safely be released "cured."

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent, &c.
5. Deoki Das; Brahman; Beggar; Arrah; 35; No. 180.	Charas	Religious mania.	Good...	The cause of insanity is unknown. The man "is a wanderer. He was arrested while running after women. He quarrels with people." He is suicidal and dangerous. There is no entry regarding epilepsy, and his family history is "unknown." He "looks perfectly mad, is dirty in his habits, always stark naked, and lies down flat on the floor in his cell. When called pays no notice to what is said. Sometimes shouts at one. Talks nonsense. Does not sleep." Admitted, 9th June 1892. Discharged cured, 9th January 1893.	11th August: "Talks in a silly manner with much gesticulation. Passionate and quarrelsome. Wanted to beat the Deputy Superintendent on 26th July." 6th January 1893: "He has steadily improved since the last note was made, and for the last three months has worked in the cook-house. He is now perfectly sane." The cause is shown in the register as "unknown," and there is no reference to charas in the register. It appears, however, that his case was entered in Statement VII under charas because he admitted that he smoked charas. There was no other evidence.
6. Krishna Parshad; Brahman; Beggar; Muttra; 25; No. 181.	Ganja	Toxic insanity.	Good...	This is a first attack, duration unknown. The cause is "unknown." "Patient is a wanderer. He was arrested by the police throwing stones at people." He is not subject to epilepsy. His family history is unknown. He is suicidal and dangerous. "He looks mad, sometimes talks nonsense, is always saluting me (the Civil Surgeon)." He is sleepless, goes naked, dirty in habits. The Civil Surgeon adds: "Patient is much better now, but looks mad still, and would probably have a relapse even if cured." (Not dated). Admitted, 9th June 1892. Discharged cured 9th January 1893.	11th August: "Very passionate and quarrelsome." 30th June: "Much excited. Tears up the floor of his cell." 6th January 1893: "He has now quite recovered." The entry of "bhang" as the cause in the register is in Dr. O'Brien's own hardwriting. It is said that the man admitted the use of bhang and asked for it. He nad been at Muttra for some months. He was, however, a Bengali.
7. Gulab; Mussalman; not known; Aligarh; 20; No. 182.	Charas	Mania ...	Good...	No information could be obtained about this man. The medical certificate says he is "very rambling, incoherent, and extravagant of speech, including delusions of a melancholic turn, singing in a weird way. He goes off into queer and extravagant postures and apostrophizes inanimate objects. Gets into violent tempers, is destructive, sleeps fairly, but talks constantly in sleep, and he often bites himself on hands, &c." Admitted, 11th June 1892. Discharged cured, 9th January 1893.	10th August: "Silly and incoherent, smiles vacantly. Was excited in July." 6th January 1893: "He subsequently became dull with slight occasional excitement. The last ten weeks he has been perfectly sane." The register gives the cause as "charas," but contains no history of charas. The register entry is in Dr. O'Brien's handwriting. It is said that this was on the man's statement that he took charas.
8. Narain; Khatri; not known; Cawnpore; 27; No. 184.	Ganja	Toxic insanity.	Indifferent.	This is the first attack and has lasted "eight years." "Fever preceded the attack." Since the attack uses ganja and charas. The brother of the patient was affected with insanity. There is no entry regarding epilepsy. The man is dangerous. He is "excited in demeanour and expression. Talks excitedly and angrily. Is irrational and inconsequent in speech. Sleeps badly." Admitted, 19th June 1892. Released improved, 16th October 1893.	11th August: "Always ready to quarrel, bites people." 5th September 1893: "He masturbates, and is gradually getting weaker. He has shown no aggressive symptoms since a year. His father wishes to receive him."

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent, &c.
9. Nemur; Passi; Service; Fyzabad; 30; No. 186.	Charas	Mania ...	Good...	This is a first attack and has lasted since 9th June 1892. As to cause it is said: "He admits that for the last four or five years he has taken 'sulfa' morning and evening." He is apparently not "subject to epilepsy." His family history is unknown. He is "not to be trusted." He has "the appearance of a man recovering from an attack of mania. His condition improved until 9th June, when he got bad. Symptoms: sleeplessness, sullen manner, wild look in eyes, accuses others of having beaten him." Admitted, 25th June 1892. Discharged improved, 11th July 1892.	There is no Asylum entry in this case except "11th July 1892. Discharged improved by order of the visitors." It is stated that the man showed no symptoms of insanity here. He is not entered as cured, because there was no cure; but as "improved," as that is the usual form when a man is made over to his friends, not being declared cured.
10. Murli Singh; Thakur; Cultivator; Aligarh; 38; No. 187.	Charas	Mania ...	Good...	The attack came on "last year" and has lasted ever since. The cause is "loss of property." There is no entry regarding epilepsy. No member of his family was insane. He is not suicidal or dangerous. The Civil Surgeon says: "I saw the man on 11th June. He was then much excited and talked irrationally and violently. His temper is bad. He eats badly. He asks for charas, and he gets excited if it be refused." Admitted, 27th June 1892. Discharged improved, 15th October 1893.	5th November: "Now much better than when admitted. Speaks rationally and is not troublesome. To be brought before the visitors." 15th May 1893: "To be detained." 15th October 1893: "Made over to his brother-in-law." It is said that this brother-in-law stated that he was a confirmed charas-smoker, and would do anything to get charas. He also asked for it. Therefore "charas," not "loss of property," is entered as the cause.
11. Bhowani, Teli Oil-presser; Unao; 27; No. 188.	Ganja	Toxic insanity.	Good...	"About four years ago the patient had been a lunatic for about four or five days." The present attack had lasted one month. The cause is "not known." "About ten years ago the patient's deceased mother had been a lunatic for about two months." He is believed to be dangerous and probably suicidal. "He is wild and excited in manner and gesture, dirty in habits, talks irrationally." Admitted, 3rd July 1892. Discharged cured, 13th February 1893.	11th August: "Much excited. Destructive in his habits. Digs in his cell. Refuses food. Is now improving." 13th February 1893: "He has been quite sane for the last three months." The register shows the cause as "ganja?" with "not known" cut out by Dr. O'Brien. But he had no mark of interrogation after "Toxic insanity." The hereditary taint has to be borne in mind.
12. KundanLall; Bania; Shopkeeper; Aligarh; 21; No. 189.	Ganja	Toxic insanity.	Good...	This is the first attack and has lasted more than five months. The cause is "over-indulgence in ganja and bhang." There is no history of epilepsy nor of insanity in the family. The man is suicidal and dangerous. The Civil Surgeon says: "He is an extremely harmless lunatic in my opinion, but requires a little care and watching to prevent him doing himself an injury. He is very smart in reply to questions, and has little or no intellectual	11th August: "Habits dirty; remains dull." 13th December: "Since the above note was made he has been perfectly sane and may now be released."

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged caused of insanity. (Statement VII.)	Type of insanity. Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiry from Superintendent, &c.
12. KundanLall—*contd.*	Ganja	Toxic insanity.	Good ...	deficiency; but is wild, staring, wandering look and his restless movements betoken want of mental balance and a liability to freaks of judgment." Admitted, 20th July 1892. Discharged cured, 13th December 1892.	
13. Jhalkha; Rachhi; Labourer; Jalaun; 42; No. 194.	Ganja	Mania ...	Bad ...	This is the second attack. It has lasted four months. "He got over the first attack two years ago by the use of some cool beverages." The insanity is "probably due to over-indulgence in ganja." The man is not subject to epilepsy, and there is no family history of insanity. He is suicidal and dangerous. "Noisy incoherence, sleeplessness, tearing of his clothes and going naked, tendency to destroy anything coming within his reach." Admitted, 21st August 1892. Discharged cured, 12th June 1893.	5th November 1892: "Very violent, troublesome, and abusive. Destructive." 11th June 1893: "He has steadily improved since the end of last year, and has been quite sane since February." The entry of cause by Deputy Superintendent is "Not known" in the Asylum register. The including of this case in the returns as a hemp case seems to have been a pure slip.
14. Tulsi; Bania; Service; Jhansi; 25; No. 196.	Bhang	Mania ...	Good...	This is the first attack and has lasted three years. The supposed cause is "over-indulgence in drugs." He is not subject to epilepsy, and there is no family history of insanity. He is suicidal and dangerous. The father says he has been insane three years, but has lately become uncontrollable." "Though able to talk quite rationally he is very restless and constantly tears up his clothes. He sleeps very little; but since admission has never shown the least violence or suicidal tendency. His state appears to be primarily due to excess in drugs." Admitted, 13th September 1892. Died, 25th October 1892.	The only asylum entry is "Died from Pneumonia, 25th October 1892."
5. Ralla Singh; Sikh; Sepoy; Jullunder; 19; No. 197.	Bhang	Mania ...	Good...	This is a first attack and had lasted one month. The insanity was "probably caused by bhang used to support his strength while under-feeding and working hard at his home." He is not subject to epilepsy. His family history is not known. He is at times dangerous. This man was a sepoy. In the statement of his case it was stated that "the symptoms pointed to poisoning by bhang (toxic insanity), but there is no history of his having taken the drug. He was "sleepless for two nights and was at times sullen, hilarious, violent and again depressed. He sat naked like a fakir." Admitted, 14th September 1892. Discharged cured, 10th October 1892.	The only entry in the Asylum register is "10th October 1892. Discharged cured by order of visitors." It is said that he did not show any symptoms of insanity in the Asylum.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiry from Superintendent, &c.
16. Kishan Lall; Brahman; Teacher; Aligarh; 30; No. 218.	Charas	Mania ...	Indifferent.	This is a first attack and has lasted about eight months. The supposed cause is "smoking of charas and over-indulgence in drinking bhang and opium-eating." He is not subject to epilepsy and none of his family have been insane. He is dangerous, but not suicidal. The lunacy certificate says: "This man is insane, being silly and weak in intellect. He is not, however, in any way dangerous. He might be admitted [to the Asylum] for two months as he is a charas smoker; and his returning home at present would enable him to go on with the bad habit, which would eventually cause him to become a dangerous lunatic." Admitted, 12th December 1892. Discharged improved, 28th March 1893.	The only Asylum register entry is "discharged and made over to his brother" on 28th March 1893.
17. Ganga Lohar; Ironworker; Agra; 26; No. 220.	Charas	Mania ...	Good ...	This is the first attack and had lasted a month. "He smokes charas and the cause is attributable to this habit." He is not subject to epilepsy and none of his family has been affected with insanity. He is dangerous. "His expression is insane and his talk is irrational." Admitted, 12th December 1892.	21st November 1893: "On admission he was very passionate and disobedient and quarrelled with all the members of his family that came to see him. On 17th April he struck Bhawani, criminal lunatic, with his fist, and also struck Padma lunatic with a brick and wounded his forehead. He left off eating in May and went down to 99 lbs. The acute stage has passed off, and he is not easily excited, but still talks nonsense and is rather slow in answering. His expression is still insane and uncertain."
18. Hari Kishor; Kurmi; not known; do.; do.; No. 219.	Charas	Mania ...	Bad ...	Absolutely nothing is known about this man. "He answers to his name, but will not answer ordinary questions as to where his home is. He is dull and sullen and has the appearance of being of unsound mind." He is, however, harmless, and "apparently fit to be made over to his friends." Admitted, 13th December 1892.	20th November 1893: On "admission he was unmanageable, filthy in habits, destructive to clothing, digging up his cell, and fed with difficulty. From first January he began to improve. He is cleanly in his habits and takes his food well. He is still dull and rather sullen, and answers questions with some difficulty. Talks nonsense. Works well at whatever is given him to do. It is from his own statement that the cause of insanity has been put down to charas."

NOTE (1.)—The total number of admissions in 1892 was—

Criminal ...	... { Males	...	10
	Female	...	1
Non-criminal ...	... { Males	...	44
	Females	...	17
	Total	...	72

Of these, the above eighteen cases were attributed in Statement VII to hemp drugs.

NOTE (2.)—In Statement VI only six are entered under toxic insanity, *viz.*, two under charas and four under ganja. Dr. Willcocks explains that if an intoxicant is entered as the cause, the entry of the mania as the type would imply that the case was one of toxic insanity. Therefore Statements VI and VII should agree; but taking the entries from the register for Statement VI several toxic insanity cases must have been included under "Mania." It may be noted that since the report was submitted, the cause of insanity in the case of Gopal, (No. 3, above) has been altered from charas to ganja.

Opinion of the Officiating Superintendent, Agra Lunatic Asylum, on the hemp drug cases admitted into the Agra Lunatic Asylum in 1892.

No.	Name.	Cause of insanity.	Type of insanity.
1	Ram Lall, Brahman, Etah ...	Charas and ganja ...	Mania.
2	Motilal, Ironmonger, Farakabad.	Heredity and pecuniary losses.	Mania.
3	Gopal, Brahman, Labourer, Jhansi.	Ganja, bhang, and charas ...	Mania.
4	Jugla, Brahman, Labourer, Aligarh.	Charas	Mania.
5	Deoki Das, Brahman, Arrah ...	The personal and family histories cannot be ascertained.	.....
6	Krishna Pershad, Brahman, Beggar, Muttra.	The personal and family histories cannot be ascertained.	.....
7	Gulab, Mussalman, not known, Aligarh.	The personal and family histories cannot be ascertained.	.....
8	Narain, Khatri, not known, Cawnpore.	Unknown. (There is no evidence to show that hemp drugs were cause of his insanity, but indulgence in them appears to have intensified it.)	.....
9	Nemur, Passi, Service, Fyzabad	The personal and family histories cannot be ascertained.	.....
10	Murli Singh, Thakur, Aligarh	Alcoholic excess and pecuniary losses.	Mania.
11	Bhowani, Teli, Unao ...	The personal and family histories cannot be ascertained.	.....
12	Kundan Lall, Bania, Aligarh...	Cause unknown: possibly syphilis.	Mania.
13	Jhalkha, Rachhi, Jalaun ...	Cause unknown (no evidence to justify us in attributing it to ganja).	Mania.
14	Tulsi, Bania	Cause unknown (no hereditary tendencies or proof of indulgence in hemp drugs).	Mania.

Opinion of the Officiating Superintendent, Agra Lunatic Asylum, on the hemp drug cases admitted into the Agra Lunatic Asylum in 1892—contd.

No.	Name.	Cause of insanity.	Type of insanity.
15	Ralla Singh, Sikh, Sepoy, Jullundur.	Although there is no evidence of indulgence in bhang the symptoms appear to me to point to transient insanity due to that cause.	Toxic insanity.
16	Kishan Lall, Brahman, Aligarh.	Hemp drugs and opium ...	Mania.
17	Ganga Lohar, Agra ...	Charas and bhang ...	Mania.
18	Hari Kishor, Kurmi, not known	The personal and family histories cannot be ascertained.	.....

C. P. LUKIS, M.B., F.R.C.S., *Surgeon-Major,*
Superintendent, Lunatic Asylum.

---

(1) Personal and family history of Ram Lall, lunatic.

Letter No. 1347, dated the 10th May 1894, from the Collector of Etah.

IN continuation of this office No. 1273, dated 2nd instant, has the honour to forward the statements of three* witnesses, with the remark that it seems generally believed in the village that the madness was brought on by charas-smoking. Ram Lall himself thinks so, and adds that he has now given up the drug.

* (1) The brother of Ram Lall, and
(2) The chaukidar of the village, who both saw him smoke, and
(3) Ram Lall himself.

2. It is difficult to elicit from these people the exact quantity that was habitually smoked and the period over which the smoking continued.

3. They seem afraid to speak the truth. In any case, since his discharge the man has never suffered, and that is two years ago.

EDGAR GALBRAITH,
Collector of Etah.

---

(2) Case of Motilal.

In accordance with the District Magistrate's orders I held an enquiry into Motilal's insanity. I do not know why Motilal's insanity has been attributed to the excessive use of bhang and dhatura. Perhaps no proper enquiry has hitherto been made as to the cause of insanity. He was only in the habit of taking bhang in moderate quantities, which could not have deranged his brain. He is said to have never taken dhatura at all. Motilal's mother had attacks of insanity at different times. His maternal grandfather is also subject to periodical attacks of insanity. Motilal had an elder brother who managed all the family business. After his death this all devolved on Motilal, the father being incapacitated from old age. The strain was too much for Motilal, who had no knowledge of business, and who incurred heavy losses. This preyed on his mind and led to his losing his reason. He had also the taint of hereditary insanity.

B. D. MISRA,
Magistrate, 1st class.

Note by Civil Surgeon on case of Motilal, lunatic.

The investigation into past family history of Motilal shows clearly that his insanity was probably hereditary.

His mother and his mother's father are both known to have suffered from insanity.

The deaths of his father and brother together with money losses probably acted on an already weak intellect and produced insanity on himself. There is no history of Motilal having been excessively addicted to bhang or to dhatura at all, and there is nothing to show that his insanity was due to these drugs.

The 2nd March 1894.

W. A. D. FASKEN,
Civil Surgeon.

In accordance with your order of the 11th February we have made a joint enquiry into the circumstances attending the insanity of the two lunatics, Gopal and Tulsi who were admitted into the Asylum at Agra, and whose insanity was attributed to indulgence in hemp drugs, and have the honour to report as follows—

(3) Case of Gopal.

The lunatic Gopal, Brahman, of Jhansi, had apparently indulged in drugs for some ten years previous to his admission into the Asylum. As he had at the time of his admission been mad some five years, he must have been in the habit of consuming drugs for some five years previous to his first outbreak. The evidence as to the amount of drugs consumed is vague; but it is evident that he indulged in them to excess, for his eldest brother says he used to smoke and drink them whenever he got a chance. He appears to have indulged in ganja, bhang, and charas impartially. There is no evidence to show that he partook of any other drugs, and the family state that he never drank spirits.

The insanity in this case appears to have been a very sudden case, the family not having any suspicion as to his condition until he suddenly commenced tearing up his clothing and anything else he could lay hands on. His father had died previous to his attack, but some little while before; and that does not seem to have had anything to do with the attack, as he was appointed to his father's job and worked in it up to the time of the attack. One of the brothers says that the neighbours were angry at his appointment, and that there had been some ill-feeling about the matter. This may possibly have tended to upset the balance of his mind.

No trace has been discovered of any actual madness among the other members of the family, but it is quite evident that the intellectual development of the family is poor. Gopal was the eldest son. His brothers all show distinctly weak intellectual types, but improve as their ages diminish. The brother next to Gopal in age is distinctly the worst of them. His appearance would certainly go to show that it would not require much to throw his mind out of balance.

(14) The case of Tulsi Bania of Jhansi.

The insanity in this case appears to have come on gradually. It had lasted about three years previous to his admission into hospital. It commenced with absent-mindedness and wandering, and eventually developed into a more dangerous type with homicidal and suicidal tendencies.

The family in this case is a small one and consists chiefly of women who did not appear before us. There does not appear to have been any hereditary tendency to insanity; at any rate the father is not aware of any other relatives having displayed any such symptoms.

The impression that his insanity was due to indulgence in hemp drugs appears to have rested mainly on his own statements to the Civil Surgeon. From the statements

now made before us this appears to have been a hallucination on his part. His father declares that to his knowledge he never indulged in them at all.

H. O. W. ROBARTS,
Joint Magistrate, Jhansi.

G. M. NIXON, M.B.,
Civil Surgeon.

REPORT ON FOUR AGRA LUNATICS.

(4) Case of Jugla, Brahman.

The family of the lunatic is poor. He has never suffered any shock, nor has he suffered from any severe illness. No other member of the family has ever been mad, nor is any trace of hereditary weakness or disease to be found.

The lunatic has for many years been addicted to the excessive use of charas. He has remained in the Bareilly Asylum once, and is now again a lunatic. He still smokes charas.

[*Note.*—Three brothers and a cousin of the lunatic state that "Jugla is again mad. No other member of our family, male or female, ever went mad. He always smokes charas very heavily. * * He has never suffered any great loss nor received any shock to cause his madness."]

(10) Case of Murli Singh.

The inquiry shows that the lunatic was never addicted to smoking charas, but that he was addicted to drink. His property was sold up, but the debt was contracted by his father. No other member of the family has ever been lunatic. No trace of any hereditary weakness or disease can be discovered. The lunatic is said to have attended a patwari's wedding and having consumed too much alcohol to have gone mad. The lunacy has wrongly been atributed to "charas."

(12) Case of Kundan Lall.

This man went mad two years ago. Since his release from the asylum he has kept well until a few days ago when he again became violent and is now once more under observation. His lunacy was formerly ascribed to "bhang," but his relatives entirely deny that he has ever used or consumed any intoxicant. The family is a poor one. No other member of it ever became lunatic. The lunatic contracted syphilis, but there is no trace of hereditary weakness or disease in the family. The lunatic has not the appearance of a charas-smoker, and his lunacy has been wrongly ascribed to "drugs."

(16) Case of Kishan Lall.

The lunacy is ascribed by the relative to the excessive consumption of drugs and opium. The lunatic contracted syphilis, but no trace of insanity or hereditary disease is to be discovered in any other member of the family. The lunatic's father and brother are both Pandits, but the lunatic himself appears to have always neglected the hereditary occupation and to have taken to evil courses when a young man. He has suffered no great loss, nor any severe shock. He has one son, who is well and perfectly sane.

[*Note.*—Kishan Lall's brother says: "He has been lunatic for some three years. It was through the consumption of bhang, charas, and opium that he became so. He is thirty-two years of age. In his youthful days he contracted syphilis, and then he took to drugs. * * He eats very little, but consumes intoxicants to any extent, limited only by his ability to obtain them."]

The above information has been obtained by questioning the near relatives of each lunatic who live either with him or near him. A copy of the information extracted from them in each case is attached. Two of these cases clearly arise from consumption of drugs while two have been wrongly attributed to them. I fear that police-officers are only too

prone to put down every case of insanity to the consumption of drugs, in order to save themselves the trouble of making a proper inquiry.

The 29th March 1894. W. TUDBALL, I.C.S.,
Joint Magistrate.

There is nothing for me to add to Mr. Tudball's remarks, save that throughout the enquiry the point aimed at was to distinguish between *immediate* and *ultimate* causes inducing lunacy in each case, and, so far as such nice distinctions were possible, between the ultimate exciting, and the determining cause. That is to say, very briefly, that the fact of the lunatic having taken some form of hemp, at some time, in greater or less quantity, habitually or occasionally or rarely was of course noted, and then the bearing of that fact upon his general condition, physical and mental, was elucidated, *e.g.*, were the charas-smoking and the "lunacy" both results of an antecedent ultimate cause, the charas being merely an exciting or determining cause? The appeal to hemp might indicate a want of mental control suggesting some antecedent mental disease or instability. In the two cases here set down to hemp we think it fairly established that the hemp was a true "cause," ultimate and exciting. I only add this note to show that we were aware of the less direct terms of the problem.

ERNEST ROBERTS, M.B.,

The 29th March 1894. *Civil Surgeon, Aligarh.*

---

5. *Deoki Das.*—No report received.

6. *Krishna Parshad.*—The lunatic cannot be traced.

7. *Gulab, Mussalman.*—The lunatic cannot be traced.

---

(8) Notes of an enquiry held in consultation with the Civil Surgeon into the personal and family history of Narain Khatri, once a lunatic.

1. Narain came back from Agra very thin and weak, but is now looking fairly well: does money-changing for his father.

2. *Family history.*—Ram Charan, his father, says he himself was never mad, nor was his father or his mother. His brothers were all healthy and long-lived. His sister's husband is insane; has been so 30 years with lucid intervals; this man took to ganja and charas since he was mad; his wife, Ram Charan's sister, once had an attack of insanity of three weeks' duration. Her daughter died mad.

Ram Charan says he never himself indulged in hemp drugs. The women, his sister and niece, did not indulge in hemp drugs. Ram Charan's wife and her relations are sane. The family, now fallen into decay, was once one of prosperous traders.

3. *Personal history.*—Narain first became mad 10 years ago. He began with bad attacks of fever. In two months he became violent. He was then 21. Up to that time he had, like all Hindus, taken a little bhang on holidays, but no ganja or charas. After he became mad he used to smoke ganja up to 4 annas worth and sometimes 8 annas worth in a day. Then his father chained him up. He demanded ganja, and his father used to give him about $\frac{3}{100}$ths of a tola of ganja daily. After about seven years of this he became very violent, and his father sent him to the Lunatic Asylum. He did not begin to take ganja for two years after his madness began; then he used to break his bonds and get ganja in the bazaar.

He was never subject to epilepsy. He was well conducted up to his madness. Since he became mad, has been in the habit of constant masturbation. Before he became mad used to eat, drink, sleep, and work well.

Ganja had a bad effect on him.

Ram Charan has seven sons and three daughters. All are healthy and sane, except Gokal, two and a half years younger than Narain. Gokal went mad about the same time as Narain, and has been mad ever since. He too was violent, and up to eight months ago was chained up. After being mad for two years he began to indulge in ganja: after two months of this his father tied him up and has not given him ganja since. Ram Charan appears to be telling the truth as far as he knows.

4. Narain himself denies having indulged in hemp drugs before he became "ill," denies having been immoral. His statements are not worth much.

5. I have also conversed about Narain with a respectable merchant of Cawnpore, who knows the family well and is distantly related to it. He corroborated what Narain's father told me. Both these men appeared to me to be speaking the truth, and I was unable to find out anything more than they had disclosed.

H. WARBURTON,
Joint Magistrate.

The 16th February 1894.

---

9. *Nemur Passi.*—This man cannot be traced.
10. *Murli Singh.*—*Vide* Report No. 4.
11. *Bhowani Teli.*—This man cannot be traced.
12. *Kundan Lall.*—*Vide* Report No. 4.

---

(13) Case of Jhalka.

Dhanju.—Jhalka is my own brother—elder brother. He is now at his home in Bilayan. He and I live separately. When he came from Agra last Asar he was in good health. He is now all right in his mind, but has become very weak. He has to remain lying down and can't do any work. If any one gives him any *roti* he eats it. He has a wife and two children. They and I support him. Formerly he was a labourer. He has always lived in Bilayan. I don't know how it was he became *paghal.* He did not take any noxious drug. He used not to take any ganja. I never take ganja. He had not been *paghal* before the occasion on which he went to Agra. I can't tell how it was he became *paghal.*

Report.

I have been unable to find out anything very definite about Jhalka. His brother, Dhanju, seems to be the only person who knows anything about the case and his statement is forwarded. Dr. Leopold, the present Civil Surgeon, did not treat Jhalka as he was not then in this district, so he knows nothing about the case. I have not thought fit to drag in Jhalka himself from Bilayan as he is now sick.

C. STEEL,
Magistrate of Jalaun.

ORAI;
The 13th March 1894.

---

(15) Ralla Singh.

Copy of a letter No. 201, dated the 14th April 1894, from the Civil Surgeon, Jullunder, to the Deputy Commissioner, Jullunder.

With reference to your No. 341 of 26th ultimo, I have the honour to state that with Pundit Hari Kishen, Extra Assistant Commissioner, I questioned the father of the man, Ralla Singh, alleged to have been insane. As, however, the alleged insanity supervened when Ralla Singh was serving with the 45th Sikhs in Jhansi, we elicited nothing which could throw any light on the cause of the condition. The father, Nathu, is a very healthy man, and says there is no disease, mental or other hereditary, in his family.

The perusal of the papers has suggested to me that possibly the man was not really insane and that on that account the Superintendent and visitors discharged him a few days after his admission. The statement of Nathu and the report of the Extra Assistant Commissioner are enclosed.

Copy of report made by Pundit Hari Kishen, Extra Assistant Commissioner, dated the 14th April 1894, to the Civil Surgeon, Jullunder.

With reference to correspondence in regard to Ralla Singh, Sepoy, I have the honour to report that after issuing verbal orders to the police as to whereabouts of the man, it was found from the report of the Police Deputy Inspector at Adampur that Ralla Singh originally belonged to Mauza Chukhiara in the Jullunder Tahsil, and was now in Meerut in the Police Department. His father, Nathu, was then sent for from his village and examined by me in your presence. I beg to submit his statement for your perusal. This statement, or rather Ralla Singh's past family history, does not throw any light on the cause of his insanity. It will, however, be observed from the statement that Ralla Singh, while in the 45th Infantry at Jhansi, was subject to insanity and sent to the Agra Lunatic Asylum. Under these circumstances an enquiry into the personal character of the man during his employment in the Jhansi 45th Infantry might be of some use, if made through the medical officer in charge of the Infantry.

Statement of Nathu, son of Charat Singh, caste Mahton, age 50 years, of Mauza Chukhiara, in the Jullunder District.

Ralla Singh, Sepoy, is my son. He is now employed as bugler in the Meerut Police. He is of strong constitution and healthy; is now of about 22 years of age. I have always enjoyed a good health. I have never taken any liquor, bhang, charas, poppy-heads or opium during the whole of my life, nor has my wife (mother of Ralla Singh) ever used these articles. My father even did not use these articles, nor was he or myself ever subject to insanity. My son, Ralla Singh, to the best of my knowledge, did not take any bhang, charas, or any other intoxicating drug or liquor. He was employed as bugler in the 45th Infantry at Jhansi for four years. He came on 3½ months' leave about the Bysakhi time two years ago (this corresponds with April 1892), and worked with me as an agriculturist in good health and returned to his Infantry after the expiry of his leave. After two months I heard that he became lunatic, and was sent from Jhansi to the Agra Lunatic Asylum. After a month or so he was discharged from the Asylum and came to me at my village and lived with me in good health for two months and then proceeded to Meerut, where he is now employed in the Police Department as a bugler. I don't know what was the cause of his insanity at Jhansi.

JULLUNDER;
The 10th April 1894.

PUNDIT HARI KISHEN,
Magistrate, 1st class.

---

(17) Notes on the previous history of Ganga Lohar, of Agra, age 26, No. 220 in the Asylum register.

Ganga, lunatic, is quite insane and can give no information about himself. The following notes have been gathered from his mother and brother. His father died when Ganga was only a few years old. The only history of madness in the family is that his father's elder brother once became insane for a few days. He dug up the floor of his house, was violent, and talked nonsense. They took him away to a neighbouring village in a cart, where some religious ceremony was performed, and he completely recovered and lived well for five years afterwards. None of the members of his family were ever addicted to the use of hemp drugs. Ganga began the habit when he was about 15 years old, and took bhang regularly every day and also charas and ganja whenever he could get them. He

acquired the habit through bad associates, with whom he used to smoke at his shop, which was some little distance from his house.

Three years ago, at the time of the *Dewali,* his wife, to whom he had been married four years, developed symptoms of madness, and after 2½ months "transferred her madness to her husband, and has ever since been sane herself." His mother and wife kept him at home for nearly two years, during the whole of which time he continued the use of the hemp drugs whenever he could get them, and the two women had very little power of restraint over him. He improved slightly now and again, but never had any real lucid interval. The symptoms of his madness were the following, *viz.*, he talked nonsense, was very destructive, threw away his clothes and tools, and refused to do any work.

The fact that his uncle was once insane (his father having died while Ganga was yet an infant) admits the possibility of heredity being factor in the causation of his insanity. The exciting and immediate cause was probably the abuse of hemp in all its forms.

AGRA; A. J. WILLCOCKS, M.D.,

The 14th February 1894. *Civil Surgeon.*

The above inquiry was made in my presence, and I quite agree with the Civil Surgeon as regards his opinion as to the cause of insanity.

No. 18. *Hari Kishor.*—No further information obtainable.

W. CLARKE,

The 14th February 1894. *Deputy Magistrate.*

BAREILLY LUNATIC ASYLUM.

(SUPERINTENDENT, DR. EMERSON.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from the Superintendent.
					18th May 1893.
1. Nathu; Hindu; Bhandari; Rajput; Tekri, Garhwal State; 34; Book 8, 38. Profession not known.	Strong drink and charas.	Toxic ...	Fair ...	Committed arson and was consequently arrested. The Police Surgeon certified that he talked incoherently and laboured under delusions, such as, that he can, and does consume from 12 to 20 seers of atta daily. No other information recorded. Form B shows :— 7. Duration of attack 12 years. 8. Supposed cause.—He was in the habit of taking strong drink and charas. Admitted, 25th November 1892.	Some slight improvement. Weight on admission 6 st. On 18th May 7 st. 6 lbs. No other record about the patient in the books. Recognizes bhang and charas, but did not know ganja. Stated he smoked bhang as well as drank it; also stated he smoked charas, and also sometimes drank it. Was shown dhatura, which he at once recognized, but stated he never used the seeds. History of drink from the patient by no means clear. Dr. Emerson: "I think the symptoms are due to combination of liquor and charas. He has not improved so rapidly as patients do who have suffered from toxic symptoms due to hemp drugs; but he has improved within the last two months: has increased 2 st. since admission." This man states he took to drinking liquor because it made him more intoxicated and sooner so than charas.
2. Fackeray; Hindu; Koney; Sudder bazar; Bareilly; "about" 20; Book 8, 668. Profession—Dyer.	Charas smoking.	Toxic ...	Fair ...	The Civil Surgeon certified "he is abusive and filthy in his habits. He smears himself over with filth." No other facts recorded. Form B shows :— 7. Duration of attack about one month. 8. Supposed cause.—"Went to Mala; when he came home complained of pain in the head; the next day he showed symptoms of insanity: is in the habit of taking liquor and smokes charas." 12. Whether dangerous to others. "At present not dangerous, but by appearances it would seem that if the disease increased he might be dangerous." Admitted, 18th July 1892; discharged, 13th February 1893.	First and only record on 30th November 1892: "Has improved very much since his admission and is now quite sensible." Weight on admission, 7 st. 6 lbs.; discharge, 8 st. 8 lbs.
3. Moti; Hindu; Brahman; Pilibhit District; 17; Book 8, 383. Profession not known.	Charas	Toxic ...	Fair ...	The Civil Surgeon certified: "Curses and swears all day long. He has been discharged three times and always gets himself into trouble again." Form B shows :— 6. Second attack, one year. 7. Duration of attack, one month.	May 9th, 1893.—No change. May 20th, 1893.—Mentally improved: might be let out. He knows charas and stated it sold at Rs. 18 per seer, also recognized bhang. Knew ganja. Stated he used to drink from 1 to 2 seers of bhang, but not daily, only occasionally—festivals. Used to

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from the Superintendent.
3. Moti; Hindu; Brahmin; Pilibhet District; 17; Book 8, 383—*contd.* Profession not known.	Charas	Toxic ...	Fair ...	8. Supposed cause.—Over-indulgence in charas. 11. Inclined to be suicidal. Admitted, 11th January 1892. Discharged, 9th April 1892. *Facts connected with first attack.* Civil Surgeon certifies: "Very noisy and sleepless at nights, refuses his food and running about naked." Form No. B shows :— 7. Duration of attack, 15 days. 8. Supposed cause.—Over-indulgence in charas. 11. Inclined to be suicidal. Admitted, 15th June 1891. Discharged, 11th January 1892.	smoke 2 annas' worth of charas during the month. Stated he did not use dhatura. Dr. Emerson: "From the former history and symptoms I am inclined to think that the symptoms were due to charas."
4. Jamna; Hindu; Bania; Agarval; Mauza Khera; station Bilakhva; Nimuch District; about 50; Book 8, 10. Profession, Shopkeeper.	Ganja	Toxic ...	Bad ...	The Civil Surgeon certified: "Jamna also was under my observation in March last suffering from the effects of ganja and charas: after a little while he recovered and was released. He is now in a much worse state, talking incessantly, noisily, and incoherently. He is intractable, quarrelsome, and threatening in his behaviour and filthy and destructive in his habits." Form No. B shows— 6. 2nd attack, about 4½ months. 7. Duration of existing attack, one week. 8. Supposed cause, fever; also attributable to charas-smoking. 9. Arrested because he was wandering in the bazar abusing and throwing stones upon passers-by. Admitted, 4th October 1892. Died, 5th November 1892.	No records about condition of patient. Died, 5th November 1892. *Post-mortem.*—"Body emaciated. Internal organs anæmic. Cause of death—General debility." No other notes.
5. Dariao Singh; Hindu; Shakar Gora; Thana Dhakia; District Saharanpur; about 35 years; Book 8, 684. Profession not known.	Ganja and charas.	Toxic ...	Bad ...	The Civil Surgeon certifies: "He goes about naked and is very dirty. The native doctor says he is very abusive and is extremely voracious." Form No. B shows— 6. Several attacks of insanity during last 10 years. This attack has been for the last two years. 8. Supposed cause attributed to over-indulgence in ganja and bhang and to loss of property. 13. Family history shows that brother had been attacked with insanity.	No records about patient, save that he was admitted into hospital on 24th September and died, 5th October. *Post-mortem.*—Body thin and emaciated: 3 holes in upper part of nose, soft palate perforated, mucous membrane lining the nose ulcerated. Internal organs generally anæmic. Disease causing death—General debility and ozœna.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from the Superintendent.
6. Mahangu Singh; Sepoy, 11th Bombay Infantry; Hindu; Rajput; Jalpura Anch; 19; Book 8, 632.	Bhang	Toxic ...	Good...	Admitted into asylum after appearing before a Military Medical Board at Bareilly. The Medical Officer in charge of the regiment gives a statements of the case:—Disease, Mania. On 11th June reported to be abnormally talkative and unruly during the night, but on examination showed no abnormal mental state. On 12th June became very excitable and lost all sense of discipline. Nights became restless, slept but little, homicidal tendency, and made an unprovoked attack on a follower. Continued in an excitable sleepless state till 24th June, when a marked progressive improvement set in. Admitted into asylum, 4th July 1892. Discharged, 14th December 1892. Under causation the Surgeon states: "The disease came on after he had been camped 7 months in a very uninteresting monotonous place." Accustomed to take bhang, but "I have not been able to get information as to whether he took it in excess or not at Rampur."	5th August, first note.—"Has been somewhat excited during the last 3 days; has not been violent or dangerous towards others." 30th November.—Is very well at present and may be made over to his friends. Informed by Deputy Superintendent that while in asylum he never spoke.
7. Bhowani Singh; Hindu; Naneawah; Bareilly; 20; Cultivator; Book 8, 604.	Charas smoking.	Toxic ...	Fair ...	Civil Surgeon certifies: "Filthy in his habits, tears his clothes and has had fits of crying." Statement B shows:— 6. Fourth attack. 7. Duration of existing attack, one month. 8. Supposed cause.—Indulgence in charas. Admitted, 21st May 1892. Discharged, 12th September 1892.	5th August.—"Is quite harmless." Partly blind, and spent most of his time in hospital (by Deputy Superintendent).
8. Devi; Hindu; Lodha; Pilibhit District; 22; Labourer; Book 8, 620.	Ganja	Toxic ...	Good...	Civil Surgeon certified: "Tears his clothes, filthy in his habits, sleepless at nights." Statement No. 3 shows:— 7. Duration of existing attack not known. 8. Supposed cause.—Over-indulgence in ardent spirits and ganja. 9. Arrested while wandering about and abusing the people. Admitted, 21st May 1892. Discharged, 14th November 1892.	20th June.—"Improving fast." 3rd October.—"May soon be discharged." No other records.

Hemp Drug cases admitted in 1892—concld.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from the Superintendent.
9. Shamsher Bahadur; Hindu; Kaith; Bareilly; Modulla; Bilaripur; Service; 18; Book 8, 596.	Charas smoking.	Toxic ...	Fair ...	Civil Surgeon certified: "Refuses to speak. Very violent at times and tears his clothes." Statement B shows— 6. First attack. 7. Duration of existing attack, "since 10 days." 8. Supposed cause.—Indulgence in charas. Admitted, 9th May 1892. Discharged, 12th September 1892.	6th August.—Has improved much in mental condition since his admission to the asylum. 10th September.—Is now quite sensible. No other notes.
10. Balak Ram; Hindu; Jat; Shahpur; Thana Bijnor; 18; Cultivator; Book 8, 572.	Bhang.	Toxic ...	Indifferent.	The Civil Surgeon certified: "His peculiar physiognomy and drollness in his speech, together with an unsteadiness in his eyes when spoken to. He is probably subject to periodical attacks when his intellect is weak. He sings aloud and makes an unusual row in his cell and will not be controlled at times." Form B shows— 6. second attack in March last. 7. Duration of present attack, one month. 8. Supposed cause not known. 13. His elder brother was also affected with insanity.	20th June.—"Seems fairly sensible: has not given any trouble since his admission to the Asylum. Discharged, 8th August 1892. *Note.*—The cause as entered in the admission book was originally "unknown," but this has been crossed out and bhang entered. Probably due to the patient having confessed to use of the drug.
11. Niadar Chamar; Hindu; Chamar; Zillah Morodad; 18; Book 8, 551.	Charas smoking.	Toxic ...	Fair ...	The Civil Surgeon certified: "He is sleepless and excited, destructive in his habits, tearing up his clothes, &c., filthy in his habits. Dull, stupid, and morose at times." Statement B shows— 6. Attacked with insanity two months ago. 7. Duration of present attack, 15 days. 8. Supposed cause not known. He smoked charas. 9. Arrested wandering about beating people. 10. No family history of insanity. Admitted, 8th April 1892. Discharged, 12th September 1892.	8th June.—"Seems a little better." 10th September.—"Now quite sensible." No other notes.

NOTE.—The total number of admissions from all causes in 1892 was—

Criminal	Males	...	6
	Females	...	...
Non-Criminal	Males	...	57
	Females	...	15
	TOTAL	...	78

Of these, the above eleven cases were attributed in Statement VII to hemp drugs.

29th August 1893.

Report of the Superintendent, Bareilly Asylum, on the Hemp Drug cases of 1892.

No. 1.—Nathu, Hindu.—The history shows Nathu began using charas after he became insane.

The evidence is to the effect that "he was never seen to take any such things before he became an insane; but subsequently, when he lost his senses, he used to haunt about the shops of charas and wine; and people had seen him sometimes taking charas."

No. 2.—Fakeray, Hindu.—We have gone into this case very carefully and examined not only the man himself, but also his mother and two of his friends who were with him when he became insane. All the witnesses deny that he ever used charas, and in the face of such strong evidence I think the case should be expunged from the hemp drugs list. His symptoms on admission were such as might have been brought about by the use of intoxicants, and charas-smoking was the cause given in his papers. These documents are, however, very carelessly filled, and it seems probable that a mistake was made in this instance.

No. 3.—Moti, Hindu.—The evidence in this case is now very clear and throws additional light on the cause of his insanity. It appears that he was the adopted son of one Makan Singh, to whom he was "much attached." The latter was a charas-smoker, and Moti contracted the habit as a boy. He enjoyed good health until the time of his adopted father's death, a few days after which he became insane. The immediate cause of insanity was therefore grief. Whether the shock above referred to would have had this effect had he not been a charas-smoker it is impossible to say. He became quite sane after his admission to the asylum in June 1891 and was discharged cured. On going out, however, he at once took to charas and was re-admitted in April 1892. He is still an inmate of the Asylum, and although fairly well I have little doubt that if discharged he would soon be brought back. In view of the additional facts brought to light, I should describe the case as one of acute mania due to grief. I am, however, of opinion that charas-smoking was a predisposing cause.

No. 4.—Jamna, Hindu.—The thanadar, Philkhua police station, reports "that Jamna left his home about 22 years ago, and that during this period he visited his house once only about twelve years ago. Since then he was living with his brother in Mussoorrie Hills, and there he got insane and was sent to Bareilly Lunatic Asylum, where he died. The villagers can give no further information about his illness, as he was absent from his home about 22 years."

No. 5.—Dariao Singh.—Was admitted to the asylum in a miserable state of health on 12th September 1892. Further investigation shows that there is a history of hereditary insanity, and although there is evidence of his having taken charas and bhang, his illness cannot be said to be due to the use of these drugs. He died about three weeks after admission from ozœna and general debility.

Post-mortem examination.—Body thin and emaciated: three holes in upper part of nose: soft palate perforated, and mucous membrane lining the nose ulcerated.

Internal organs generally anæmic.

The further inquiry showed that "Puland Singh, father of Dariao Singh, had also been a lunatic, and that Punai Singh and Buddhi Singh, sons of the said Dariao Singh, are lunatics as well." The evidence as to the use of drugs by Dariao Singh was conflicting.

The following passage from the Tahsildar's report is interesting:—"Dariao Singh's insanity is considered hereditary, merely on the ground that the disease is passing down his family from one member to another. This conclusion may perhaps be regarded as contradictory with reference to the European system of medical jurisprudence. But besides those mentioned above no other particular cause of insanity has been found in the above named village."

No. 6.—Mahangu Singh.—This man is now residing at Arrah. There are none of his relatives here and no additional information can be obtained regarding him. The case is recorded as one of toxic insanity due to over-indulgence in bhang. Any further information required may be obtained through the Government of Bengal.

[Inquiry was accordingly made regarding the past, personal, and family history of Mahangu Singh in the Arrah district. The result is as follows:—

1. Is there any history of insanity in any near relation of the lunatic?	No, according to his statement.
2. Is there any other cause (misfortune, jealousy, grief, fear, illness, injury, etc.) to which the insanity might be ascribed?	Apparently not.
3. Was the lunatic a moderate or excessive consumer of *bhang?* Was he an habitual or occasional consumer?	He was a moderate consumer for about a year and experienced no ill-effects. He was about six months at Rampur and during that period consumed it to excess: the madness came on suddenly. He has not consumed any *bhang* since then.
4. Had he consumed an unusual quantity of *bhang* about the time he became insane, and did he continue to consume it after becoming insane?	He was a moderate consumer for about a year and experienced no ill-effects. He was about six months at Rampur and during that period consumed it to excess: the madness came on suddenly. He has not consumed any *bhang* since then.
5. Why do his friends or those who filled up the descriptive roll think that *bhang* caused his insanity?	Because there was no other known cause.
6. Was he addicted to any other intoxicant, such as opium, alcohol, dhatura, etc.?	No, according to his statement.

From our enquiry the insanity appears to have been caused solely by the excessive use of *bhang*. It will be noticed that while he was a moderate consumer he experienced no ill-effects, but, on the other hand, was in excellent health. When he commenced immoderate consumption he lost his appetite and could not eat his full rations.

J. H. GARRETT,

Joint Magistrate, Shahabad.

W. FLOOD MURRAY, *Surgeon-Lieut.-Colonel,*

The 2nd January 1894. *Civil Surgeon.*

No. 7.—Bhowani Singh.—The evidence in this case shows that insanity (toxic) was brought about by charas-smoking. The case is very similar to that of Niadar, reported on below, and confirms the fact that insanity may be produced by a single indulgence in the drug. Bhowani Singh became insane after smoking charas at the time of Holi festival. He recovered soon after his admission to the Asylum and has remained well since. He is quite candid as regards the cause, and I see no reason to doubt his statement, which is confirmed by his mother and brother. The Assistant Collector's report after further enquiry was as follows:—

"The civil officer who conducted the further inquiry 'in consultation with the Civil Surgeon' reported as follows: 'With much difficulty Bhowani Singh was found; and I have

recorded the statements of his brother and mother. The only reason they are able to suggest for his going mad is that he smoked some charas at the Holi festival. He never smoked before or since, or used any intoxicant'".

No. 8.—Devi, Hindu.—Every effort has been made to find this man, but without success. The case is recorded in the Asylum books as one of toxic insanity due to the use of ganja and alcohol. It cannot fairly be attributed to hemp drugs entirely, as the alcohol was, no doubt, an important element in the case.

No. 9.—Shamsher Bahadur.—There is only one relative of this man in the Bareilly district, *viz.*, his uncle, Mangli Lal. He states that Shamsher Bahadur was a charas-smoker, and there is no other cause assigned for his insanity. He was admitted to this Asylum with symptoms such as would be produced by excessive use of intoxicants, such as charas. He was, however, also addicted to the use of country liquor, which it may be presumed was a factor in the case.

In my opinion this was a case of toxic insanity produced by over-indulgence in charas and liquor.

There is no history of insanity in his family.

If any further information is required about this case it might be obtained from the authorities at Malwa, where the man now resides.

No. 10.—Balak Ram.—The evidence collected in this case clearly proves that it was one of hereditary insanity and was not due to bhang.

No. 11.—Niadar, Chamar.—There is no doubt that this man's insanity was brought about by charas-smoking. From the history it appears that he only indulged in one chillum. This, if true, is an interesting fact as showing how quickly insanity may be brought about by a very small quantity of the drug. Niadar was admitted to the asylum on 8th April 1892. On 8th June he was reported as improving, and was discharged cured in September 1892. He is now well, and has not indulged in charas-smoking since his discharge. This is probably due to the fact that he was never a confirmed smoker. There is no history of insanity in his family.

The report after the further inquiry is that "he was quite well until one day, in the village of Mullakpur, some one gave him a chillum of charas. He does not know how much charas there was in the chillum. Nor does he know whether any other drug was mixed with the charas. He had never smoked charas before. * * He was for about a month at home from the time he smoked the charas until he was removed to Bareilly Asylum. During that time he ran about wild. He was quite insane." He was aged 18 years.

J. ANDERSON, M.B.

LUNATIC ASYLUM, LUCKNOW.

(SUPERINTENDENT, DR. HOOPER.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
1. Jaffir Ali; Musalman; Servant; Hardoi; 37; 13·3.	Charas	Melancholia.	Good...	The statement received from the Magistrate with this man shows that the cause is not known, and that (8 *b*) the insanity is not attributable to over-indulgence in ardent spirits or in bhang, ganja, or similar drugs. (9) The man had gone into the Government school at Bilgram and damaged a door and broken panes of glass. Admitted, 11th January 1892.	This man was under confinement from melancholia from December 1889 to September 1890. On that occasion there is an entry showing that his brother attended in May 1890 and stated that Jaffir smoked charas. On this the cause "unknown" was altered to "charas." On the present occasion the cause formerly shown is repeated. There are no symptoms of anything but melancholia; and in Statement VI that is the type adopted.
2. Mithu; Musalman; Labourer; Unao; 30; 13·9.	Ganja...	Toxic insanity.	Good...	The papers show that this man uses ganja. The Civil Surgeon of Unao certified on 3rd February 1892: "This man was in the lunatic asylum about one year ago. He has developed insanity again by over-indulgence in ganja smoking. For the past month his neighbours have noticed signs of an impending attack, which showed itself suddenly by his furiously attacking a dafadar. Since his admission into hospital he is suffering from acute mental derangement and had to be ironed for safety." Admitted, 10th February 1892. Made over to his father, 8th April 1892.	This man had been in an Asylum before but not in Lucknow. He was quiet from the time of his admission and made over to his father within two months. The violence before admission and the speedy recovery point to toxic insanity.
3. Madan Lall; Brahman; Servant; Bans Bareilly; 28; 13·15.	Intoxicating drugs.	Toxic insanity.	Indifferent.	The statement attributes the insanity to the use of intoxicating drugs. It shows that he "smokes ganja and charas and takes bhang." The medical certificate of 10th March 1892 says that he "speaks incoherently, is very filthy in habits, and is regardless of personal wants and comforts." He has a brother Ramsahai, Clerk in the Cantonment Office, Dilkusha. Admitted, 17th March 1892. Made over to his friends, 10th November 1892.	This man was only 94 lbs. weight on admission. He gained 24 lbs. in the Asylum in eight months and was made over to his friends "much improved."
4. Lalta; Hindu, Bhat; Servant; Lucknow; 25; 13·18.	Ganja ..	Mania ...	Fair ...	The statement shows that this man "smokes ganja and charas." The Civil Surgeon of Unao certified on 3rd April 1892 that "Lalta Bhat was taken under observation on 17th March 1892. On admission was suffering from acute mental derangement, violent, abusive, noisy and troublesome, assaulted the warders every time the cell door was opened to give him food or water. In the end he had to be kept hand-cuffed to have control over him. Talks incoherently, shouts day and night, and very destructive. Sleeps little, and refused food for several days. Lalta is	This man had a ganja corn on his right thumb. He was thin, but in fair health when admitted. He was dangerous, destructive, noisy, filthy, and maniacal. In June he is entered as "much improved since admission: behaves sanely." He increased eleven pounds in the Asylum and was discharged cured in about three months. This seems a case of temporary mania from ganja and charas; but the Superintendent has not included it under "Toxic insanity," but under "Mania."

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
4. Lalta—*contd.* ...	Ganja...	Mania ...	Fair ...	a confirmed ganja and charas smoker; and it would appear over-indulgence in these drugs brought on the present attack. Admitted, 15th April 1892. Made over to his friends, 28th July 1892.	
5. Manohar Ahir; Servant; Cawnpore; 45; 13·19.	Ganja...	Mania ...	Fair ...	In this case the statement shows— (8) Supposed cause, not known. (*a*) No fever previously. (*b*) Used to smoke a little ganja. (*c*) Insanity due to death of his wife. The medical certificate of 18th April 1892 says: "Speaks incoherently, is regardless of personal wants and comforts and is filthy in habits." Admitted, 24th April 1892. Discharged as cured, 30th July 1892.	When admitted to the Asylum this man was in fair condition, but with a chronic cough. He was excited and filthy, but was improved by June (two months later). He had been insane four months before being admitted. The case is entered in the register as due to "ganja or grief," and is diagnosed as "Mania" (not "Toxic insanity"). Yet in the returns it is shown as due to ganja.
6. Ramcharan; Brahman; Cultivator; Barabanki; 24; 13·24.	Bhang...	Toxic insanity.	Good...	The statement gives as the cause of insanity in this case that the man "was fond of reading Hindi books, in which he felt heat." (This last clause is a translation of the common Hindi expression for becoming mad). It adds that he used "bhang and tobacco." It shows that "Ramdas, his brother, is insane." The medical certificate of 5th May 1892, simply says: "Delusions, dirty habits." Admitted, 9th May 1892. Made over to his mother, 19th August 1892.	The Asylum history of Ramdas (the brother) was got out. It was a case of "Mania." He had periodical attacks of mania. It was not a case of toxic insanity, the Superintendent says, Ramcharan had, no doubt, a hereditary taint. He was not insane in the Asylum. He "behaved rationally since admission." It looked from the medical certificate like a man under the influence of a temporary cause like bhang, and as the man came to the Asylum quite well, there was nothing else to help diagnosis.
7. Durga; Hindu; Shopkeeper; Unao; 55, 13·32	Ganja...	Mania ...	Indifferent.	The statement shows— 6. "Attack periodically each year. He has last been attacked from last fifteen days." 7. "Duration, twenty years." 8. "He lives in village from last twenty years. He keeps a shop in the village. He sustained loss; since then he is suffering much from insanity." 9. "He has been seen naked, using abusive words. The medical certificate of the Civil Surgeon of Unao, dated 11th July 1892, shows that "Durga Bania was taken under observation on 21st June 1892, and was at the time very boisterous, noisy, naked. He made several attempts to assault and bite people who attended to him. Is filthy in his habits, drinking	When admitted to the Asylum he was noisy, bad sleeper, and troublesome. The cause "ganja-smoking" was put down from the medical certificate. The idea seems to be that he was constantly insane from ganja, a case of peculiar intolerance to the drug. There was no mention of the brain in the record of the *post-mortem* examination held by the Assistant Surgeon.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
				his own urine and plastering his fæces about the walls and his own body. The previous history is, he is subject to attacks of lunacy often in the year for the past 20 years, and when seized is a violent and dangerous lunatic, and unless controlled would cause serious injury to others. Durga is a confirmed ganja smoker and eats bhang as well. This last attack has so frightened his relations that they will have nothing further to do with him. There is now a lucid interval, but he cannot be trusted out, as a few days' ganja-smoking will again bring on an attack." Admitted, 14th July 1892. Died of pneumonia, 14th December 1892.	
8. Kirhir; Chama; Labourer; Sitapur; 26; 13·34.	Ganja...	Acquired imbecility.	Good ..	The statement shows — 6. "Insane four years." 7. "Severely attacked since last October 1891." 8. "The man indulged in 'excessive ganja-smoking.' But the Civil Surgeon says the cause of insanity is 'not known to him'." He writes: "14. The man is imbecile; his habits are dirty. His manner is extremely childish. He will not give a coherent answer except very rarely. He is constantly smiling in a fatuous manner, and his manner and appearance leave no doubt that he is an idiot, without, however, as far as has been observed, dangerous tendencies." Admitted, 21st July 1892.	This is entered as a case of "acquired imbecility due to ganja-smoking." He had suffered from several attacks of insanity, and drifted into imbecility. He has nnt improved in the least since he came in. There is no other cause assigned for his condition. Therefore it is put down to ganja as he is said to have smoked. It is rather extraordinary that at his age ganja should have brought him to his present condition.
9. Jagmohan Singh; Hindu; Cultivator; Lucknow; 30; 13·35.	Ganja...	Toxic insanity.	Good...	The statement shows that this is a second attack, that fever preceded this attack, that the supposed cause was taking ganja and bhang, and that two members of his family are affected with insanity. The medical certificate of 20th July 1892 shows that he "speaks incoherently, is violent and abusive, and is filthy in habits." Admitted, 23rd July 1892. Discharged cured, 10th April 1893.	Volent, filthy, sleeping badly, throwing off clothing, when admitted in July. By the end of 1892 he showed signs of improvement. He kept well for three months, and was discharged cured. These were typical symptoms of ganja; but there must have been an inherited tendency, the Superintendent thinks.
10. Parag; Chamar; Servant; Partabgarh; 25; 13·36.	Ganja...	Dementia	Weak...	The statement shows that the insanity was "attributable to ganja and bhang." The medical certificate of 24th July 1892 says that he "cannot converse or give an intelligible account of himself, and sleepless and dirty in habits. Refuses food. Requires restraint." Admitted, 20th July 1892; made over to his mother, 17th August 1892.	He came in weak and appeared to be threatened with general paralysis. He did not improve and was made over to his mother in a helpless state. This is a case about which there must be doubt, the Superintendent says; but ganja is the only cause suggested by the history. It is strange that at 25 this should be the result. There was probably weak brain from other causes.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facte ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from the Superintendent.
11. Bindeshwari Singh; Hindu; Servant; Partabgarh; 39; 13·37.	Bhang	Mania ...	Fair ...	The statement shows— 6. "First attacked, symptoms of insanity appeared six months ago. Increased much during last six weeks." 8. (Supposed cause)— "(*a*) Suffering from piles for the last nine years. Has a boil on his left buttock for the last 18 months, which has now grown sinus. "(*b*) Addicted to use of bhang daily, occasionally to ganja." The Civil Surgeon writes, 27th March 1892: "Bindeshwari Singh has been under observation since 16th June 1892. He is mad. He looked wild and would be dangerous if set at large." Admitted, 29th July 1892; made over to his brother, 15th September 1892.	When he came in he was thin and noisy, dirty and destructive, sleeping badly. He rapidly improved and increased in weight ten lbs., and was made over to his brother "improved." It was not a clear case, because the attack was six months old, and there was no typical symptom of ganja. The suggestion in the history alone pointed to ganja or bhang.
12. Bihari; Hindu; Darzi; Barabanki; 34; 13·39	Ganja	Toxic insanity.	Fair ...	The statement has no indication of the cause of insanity nor any information whatever about this man except that he wanted to beat a chaukidar. The medical certificate of 31st July 1892 says that he had "dirty habits, blood-shot eyes, incoherency of speech." Admitted, 11th August 1892; made over to friends, 18th July 1893.	When admitted, the Superintendent recorded that he "appears to be affected by toxic insanity and says he is a ganja-smoker." When the excitement passed away he became stupid and silly and was made over to his friends "improved" after about a year of treatment. He was still silly and stupid in manner but quiet, and eating and sleeping well. This seemed to the Superintendent a typical case from the blood-shot eyes and violence. The silliness and stupidity would follow on the abnormal violence.
13. Ramanand; Brahman; Cultivator; Sultanpur; 28; 13·43.	Bhang...	Recurrent mania.	Indifferent.	The statement shows that he was attacked first three years ago and was consequently sent to the Lunatic Asylum, Lucknow. Having remained there for ten months, he got well and returned home. The medical certificate of 16th September 1892 says; "Ramanand has got a wild-looking and restless eye and a lunatic expression. He talks rambling and incoherently. He says he has got 25 children, 50 elephants, and 50 carts." Admitted, 29th September 1892.	He was in the Asylum previously from July 1889 to June 1890 for "mania" and made over cured to his friends. When admitted in September last was in indifferent health, sleepless, destructive, dirty, and noisy. He has very slowly improved since. He recognizes bhang and sometimes says he used to drink it occasionally. Sometimes he says he did not. The Superintendent thinks the bhang is probably the exciting cause of the present attack of recurrent mania: that is all.
14. Mahadeo; Hindu; Cultivator; Kheri; 14; 13·47.	Ganja...	Toxic insanity.	Indifferent.	The statement shows this to be a third attack and ascribes it to fever. "Ganja, charas and tobacco are used by him" (the lunatic). The medical certificate of 23rd August 1892 says: "Filthy and violent habits. Incoherent speech. Suicidal tendency. Sleeplessness at night. Sings now and then." Admitted, 18th October 1892. Discharged, 11th April 1893.	He was a boy of 14 years and admitted the use of ganja and charas. He was excited, dirty, restless, and sleepless when admitted. He improved rapidly, and was discharged "cured." He increased 9 lbs. in weight. The Superintendent entered ganja as the cause here because the lad admitted the use of hemp drugs, and this seemed a probable cause.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
15. Raghunath; Hindu; Bania; Shopkeeper; Unao; 40; 13·54.	Ganja.	Recurrent mania.	Fair ...	The statement shows a previous attack eight years ago and that the present attack began in Cheyt (eight months before). It ascribes it to "luh" (hot wind) and fever, and states that the lunatic "smokes ganja and tobacco and drinks bhang." "Found wandering near the railway and suspected of intention to commit suicide." The medical certificate of 28th November 1892 says:—"makes inconsequent statements. Insane manner and appearance. Throws off clothing. Sleeps badly. Runs about aimlessly." Admitted, 4th November 1892.	The lunatic admits that he smoked ganja twice daily for four years. He was very noisy singing at night, destructive, sleepless, and dirty when admitted. He began to show slow signs of improvement in the beginning of this year, but is still given to thieving and destructive. This is probably a case of recurrent mania, the present attack having been excited by bhang or ganja. He had a previous attack eight years before and the present attack began eight months before admission. He smiled very cheerily when he saw ganja, but said he did not want it now. He thinks charas stronger, but never used it.
16. Baldeo Lodhi; Cultivator; Kheri; 25; 13·56.	Ganja.	Toxic insanity.	Good...	The statement says: "(6) Three years ago he was once attacked by insanity. (8) (*a*) Had fever of serious type and *seet* (a kind of illness). (*b*) Smokes ganja." "13. His maternal grandfather was affected with insanity." "14. He tried twice to drown himself in the river." The medical certificate of 18th October 1892 says: "Baldeo Lodhi was kept under close observation during the last few days. No signs of insanity were observed in him. It is possible that fits of temporary insanity might break out. At present he is quite in his senses." Admitted, 15th December 1892. Discharged, 12th April 1893.	This lunatic has behaved sanely since admission. The Superintendent diagnosed this as a case of toxic insanity from its history. It seemed something like delirium tremens. But there seems also to have been a hereditary taint.
17. Mullu; Hindu; Carpenter; Lucknow; 45; 13·26.	Ganja.	Toxic Mania.	Fair ...	In the statement it is said that the cause is "not known." The man, however, "prior to illness used to drink a little bhang very often." The man is said tobe "suicidal." There is no medical certificate. Admitted, 2nd June 1892. Discharged, 20th July 1892.	When he came into the Asylum on the 2nd June he was in fair condition, but had clearly been obstreperous from his wounds and scars. He admitted he had been drinking spirits freely, and a little bhang very often. He was practically sane from the time of admission; and he was discharged "cured" on 20th July. This was in the opinion of the Superintendent a case of toxic mania. But the "free drinking of spirits", is as likely to have been the cause as the "little bhang."

NOTES.—(1) Statement VII shows 16 admissions as due to hemp drugs and Statement VI shows seven cases of toxic insanity as due to hemp drugs. The seventeenth case in the above list seems to have been omitted from both these statements.

(2) The total number of admissions from all causes in 1892 was :—

Criminal ...	Males ...	...	13
	Females ...	...	...
Non-criminal	Males ...	...	55
	Females ...	...	21
	TOTAL ...		89

Of these, sixteen cases were attributed in Statement VII to hemp drugs.

30th August 1893.

Statement compiled by the Superintendent, Lucknow Lunatic Asylum, giving the result of local enquiries into the past, personal, and family history of the 17 lunatics confined during 1892, whose insanity was attributed to hemp drugs.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	Facts ascertained from local enquiries.	Asylum Superintendent's final report.
1. Jaffir Ali; Musalman, Servant; Hardoi; 37; No. 13 3.	Charas ...	Melancholia.	Friends cannot attribute any cause for this man's insani y; they never heard of his being a ganja smoker or addicted to the use of intoxicants. No history of insanity in the family. *The brothers were not examined.* [NOTE.—The brothers were not found. Three Muhammadans who knew the man well were examined, and said he did not use hemp or any intoxicant.]	No inherited tendency to insanity. A brother attended at the Asylum and stated that Jaffir Ali smoked charas. The exciting cause of this man's insanity was probably charas.
2. Mithu; Musalman; Labourer; Unao; 30, No. 30·9.	Ganja. ...	Toxic insanity.	Was fond of all sorts of intoxicating liquors and drugs. Used 3 pies worth of opium and 6 pies worth of ganja daily, also used to drink liquor and tari. No history of inherited tendency elicited.	Appears to be a clear case of toxic insanity caused by ganja and other intoxicants.
3. Madan Lall; Brahman; Servant; Bans Bareli; 28; No. 13·15.	Intoxicating drugs.	Toxic insanity.	No madness in the family. Used to drink ganja and charas to a large extent. Has been "all right" since discharge from the asylum.	Also apparently, a clear case of toxic insanity caused by the use of ganja and charas.
4. Lalta; Hindu; Bhat; Servant; Lucknow; 25· No. 13·18.	Ganja ...	Mania ...	Neither Lalta nor any of his relatives have been traced as yet.	It seems established that Lalta was a confirmed ganja-smoker and he had a ganja corn on his right thumb. The history of the case clearly shows that insanity resulted from ganja-smoking, and the case should have been diagnosed as one of "toxic insanity."
5. Manohar; Ahir; Servant; Cawnpore; 45; No. 13 19.	Ganja ...	Mania...	Became mad through reading the Ramayan it is said. Did not take drugs. No one mad in the family. [NOTE.—The inquiry dealt with nothing more than the drug habit, which was disproved.]	In this case grief (at death of his wife) and religious frenzy are given as probable causes of insanity. But enquiries at the time of this man's admission into the Asylum elicited that "he smoked a little ganja." There appears to have been no family history of insanity, and ganja was probably one exciting cause in this case.
6. Ramcharan; Brahman; Cultivator; Barabanki; 24; No. 13·24.	Bhang	Toxic insanity.	Used to get intoxicated on bhang; every third or fourth day used to take some. The brother became mad about 4 years previously and took no intoxicant. [NOTE.—The father and mother say that they "had four children, 2 boys and 2 girls. Both the sons are mad. Ramcharan became mad three years ago. * * Both brothers became mad at about the same age."]	There was doubtless inherited tendency in this case, but bhang-drinking was the exciting cause.
7. Durga; Hindu; Shopkeeper; Unao; 55; No. 13·32.	Ganja ...	Mania ...	Nothing further ascertained about this case.	This man died in the Asylum from pneumonia on 14th December last. There is no evidence of inherited tendency, and it was established that he was a confirmed ganja-smoker. No other cause than ganja-smoking assignable.

Statement compiled by the Superintendent, Lucknow Lunatic Asylum, giving the result of local enquiries into the past, personal, and family history of the 17 lunatics confined during 1892 whose insanity was attributed to hemp drugs—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	Facts ascertained from local enquiries.	Asylum Superintendent's final report.
8. Kirhi; Chamar; Labourer; Sitapur; 26; No. 13'34.	Ganja ...	Acquired imbecility.	Kirhi became insane through excessive use of ganja about 2½ years ago. This was the first attack of insanity. No relation residing in village or vicinity. The Civil Surgeon is of opinion that a clear case has not yet been made out that this man's insanity was due to excessive ganja-smoking. [NOTE.—No relative could be traced. The Civil Surgeon of Sitapur, who conducted the further inquiry says: "A clear case has not yet been made out that this man's insanity was due to excessive ganja-smoking. There is a history of the man having received a beating prior to his becoming insane. The apparent discrepancy in undersigned's remarks in the original certificate is due to his quoting the police report, which said that the insanity was due to ganja. His own opinion he records as cause not discovered."]	The statement received with this man when admitted into the Asylum in July 1892 says clearly that no other member of family was insane and gave the cause as "excessive ganja-smoking." There is no other assignable cause than ganja in this case.
9. Jagmohun Singh; Hindu; Cultivator; Lucknow; 30; No. 13'35.	Ganja ...	Toxic insanity.	"No madness in the family; would appear to have taken charas, but his friends and relations put down his madness to a malign influence of some devil. He has never been married or had children."	The statement received with this man on admission says: "Cause, over-indulgence in ganja and bhang." Two members of family affected with insanity. Hemp drugs in some form probably the exciting cause in this case.
10. Parag; Chamar; Servant; Partabgarh; 25; No. 13'36	Ganja ...	Dementia	The enquiry (made by a native) says "no member of family found to have ever become insane. Parag is said *to be* (*sic*) addicted to no intoxicant." [NOTE.—The Deputy Magistrate who conducted the inquiry reports "Parag is found to have become insane four years ago quite accidentally. No member of his family is found to have ever become insane nor to have been addicted to intoxicants. Parag is said to be addicted to no intoxicants. He is said to be all right since his release from the Lunatic Asylum." The Magistrate forwards record of the enquiry.]	This man was sent to the Asylum by the Cantonment Magistrate of Lucknow, who records in his own writing "excessive use of intoxicating drugs" as the supposed cause of insanity. The man must have been employed in the Lucknow Cantonment,* and the Cantonment Magistrate (a careful officer) had doubtless grounds for his statement. Ganja and bhang are the only assignable causes in this case. [*NOTE.—The grounds for this remark are not apparent.]
11. Bindeshwari Singh; Hindu; Servant; Partabgarh; 39; No. 13'37.	Bhang ...	Mania ...	To the reporter in this case it appeared that— "The main causes of madness were a long illness and his father's death. Is now quite a sensible man. There is no madness in the family." "*The man took bhang and takes it still. He took ganja for a while before he was mad.*" The Civil-Surgeon considers mental anxiety, family troubles, abstinence from food, indulgence in bhang and ganja contributed to bring about derangement of brain.	Ganja and bhang doubtless *mainly* contributed to cause insanity in case. [NOTE.—The reports on this case by the Joint-Magistrate and Civil Surgeon are appended.]
12. Bihari; Hindu; Darzi; Barabanki; 34; No. 13'39.	Ganja ...	Toxic insanity.	This man cannot be traced ...	This man admitted to the Superintendent that he was a ganja-smoker. No family history of insanity was elicited from friends. His was probably a case of toxic insanity from ganja, in which the after-effects continued for an unusually long period.

Statement compiled by the Superintendent, Lucknow Lunatic Asylum, giving the result of local enquiries into the past, personal, and family history of the 17 lunatics confined during 1892 whose insanity was attributed to hemp drugs—contd.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity. (Statement VII.)	Type of insanity. (Statement VI.)	Facts ascertained from local enquiries.	Asylum Superintendent's final report.
13. Ramanand; Brahman; Cultivator; Sultanpur; 28; No. 13·43.	Bhang ...	Recurrent mania.	The enquiry into this case was made apparently by a native official. The report says: "The residents of the village where he used to reside, while attributing the cause of insanity to a sunstroke, declare that he was not a consumer of hemp drugs or any intoxicant, nor had he any domestic trouble, grief, or fright. No former member of the family is said to have been affected with insanity in any shape or way." He belongs to the "Sarwaria clan of Brahmans, which is, no doubt, partial to the use of bhang."	In view of the history of this case, bhang-drinking very probably *was* the exciting cause of insanity. [NOTE.—The letter of the Deputy Commissioner of Sultanpur, which is imperfectly abstracted by the Superintendent, is annexed. The fact that the fair copy was signed by a Deputy Collector "for F. W. Brownrigg, Officiating Deputy Commissioner," seems to have put Dr. Hooper into thinking that the inquiry was conducted by "a native official."]
14. Mahadeo; Hindu; Cultivator; Kheri; 14 No. 13·47.	Ganja ...	Toxic insanity.	"Mahadeo's mother and persons residing in the same village state that Mahadeo does not use ganja, nor did he ever use it. He was laid up with fever and ague for 15 days, and this affected his brain and caused his insanity. None of his family ever was insane. He had once before, some three years ago, become insane on account of fever and ague; but that time it was not severe." The Assistant Surgeon thinks he may have been mistaken in concluding that the symptoms were produced by ganja. [NOTE.—The Deputy Commissioner adds: "The police being obliged to report cause, put it down to ganja without proper inquiry."]	The cause given in the statement received with this lad was fever, but *also* attributable to ganja, charas, and tobacoo used by him. The patient admitted the habitual use of ganja and charas. The symptoms, rapid improvement and cure, support the conclusion that the case was one of toxic insanity produced by the use of ganja and charas.
15. Raghunath; Hindu; Bania; Shopkeeper; Unao; 40; No. 13·54.	Ganja ...	Recurrent mania.	No insanity in family traced; was not addicted to the consumption of any intoxicants. [NOTE.—The Superintendent does not quote the report to the effect that inquiry showed that the lunatic "lost a younger brother some six months before becoming mad, of whom he was very fond." Mr. Radice, City Magistrate, Lucknow, discovered this from the man's relatives.]	The lunatic admits that he smoked ganja twice daily for 4 years. He smiled very cheerily when shown ganja. Insanity probably excited in this case by use of ganja—at all events in the recent attack.
16. Baldeo; Lodhi; Cultivator; Kheri; 25; No. 13·56.	Ganja ...	Toxic insanity.	A careful enquiry from the father and other persons residing in the same village shows that Baldeo used to smoke "too much ganja," but at the time of his first attack he was laid up with fever. Baldeo's grandfather on his mother's side was insane. [NOTE.—The same witnesses say: "At the second time when he became insane his malady was not preceded by fever."]	There was undoubted inherited tendency in this case, but the second attack appears to have been induced by excessive ganja-smoking.
17. Mullu; Hindu; Carpenter; Lucknow; 45; No. 13·26.	Ganja ...	Toxic mania.	No madness in family; now quite well. Stated himself that he used to drink bhang; had been taking bhang some 10 or 12 years, but has given it up since recovery. Used to take about half a tola of bhang daily. [NOTE.—The report says nothing about spirits. Apparently no inquiry was made about it by the City Magistrate.]	Appears to have been a clear case of toxic insanity induced by the use of bhang and probably of spirit also.

W. R. HOOPER,
Superintendent, Lucknow Lunatic Asylum.

11.—Case of Bindeshwari.

To the Deputy Commissioner.

Enclosed is the evidence recorded by me. Unfortunately the Civil Surgeon was unable to come and assist in the inquiry.

To me the evidence seems to show that the main causes of Bindeshwari's madness were a long illness, though not a very serious one, and his father's death. The latter event happened when he had been ill and probably in bad spirits for some time, and seems to have finished the upsetting of his mental equilibrium. He is now quite a sensible man and gives rational answers, and is evidently much better informed than the average of villagers in these parts. The evidence shows that there is no madness in the family, those who survived their childhood having lived to a good age and kept their wits all the time. The man took bhang and takes it still. He took ganja for a while before he was mad. This may have been a contributory cause to his madness, but not, I think, the main one.

Dated 11th January 1894. A. SABONADIÉRE.

Will the Civil Surgeon kindly go through these statements, and after recording any remarks he may wish to make, return them to me for transmission to Superintendent of the Asylum?

I can find no trace of Prag's case.

H. W. REYNOLDS,

Dated 12th January 1894. *Deputy Commissioner.*

I have read carefully, and am of opinion that mental anxiety, family troubles, and abstinence from food contribute to indulgence in bhang and ganja. These sedatives help to bring about derangement of brain.

Prag's case is nowhere to be found either in jail or hospital.

W. SAND,

Dated 17th January 1894. *Civil Surgeon.*

[*Note.*—A brother and three friends speak to the very moderate use of bhang by Bindeshwari. He was in the Calcutta Police, broke down in health, and was seven months in hospital from boils. He returned home in bad health. Five months after this his father died, and Bindeshwari went mad. All the witnesses ascribe his madness to grief. So does Bindeshwari. He alone mentions the use of ganja. He says his bhang cost him "an anna a month."]

Copy of report in case No. 13 (Ramanand).

No. 121, dated Sultanpur, the 3rd February 1894.

From—The Deputy Commissioner, Sultanpur,

To—The Superintendent, Lunatic Asylum, Lucknow.

With reference to your No. $\frac{L.A.}{588}$, dated 23rd November last, and to G. O. No. 257, dated 8th idem, I have the honour to report the result of the enquiries instituted regarding the past personal and family history of Ramanand lunatic.

2. Ramanand first showed symptoms of madness in July 1888 and then got gradually worse. In July 1889 he was sent to the Lunatic Asylum at Lucknow, where, after treatment for 10 months, he apparently got cured and was released as sane. He was only about 19 years old when the symptoms of insanity first appeared. As a boy his intellectual powers were average, but he received no education. Previous to the commencement of the symptoms he had not been suffering from any disease. The residents of the village where he used to reside, while attributing the cause of insanity to a sunstroke, declare that he was not a consumer of hemp drugs or any other intoxicant, nor had he any domestic trouble, grief, or fright, to which his insanity might be attributed. His mother is in good health. His father, who is dead, was a man of less than avarage intelligence and of very silent and retiring disposition, and died of some internal disease. No former member of the family is said to have been affected with insanity in any shape or way. He belongs to the Sarwaria clan of Brahmans, which is, no doubt, partial to the use of "bhang," but there is nothing to show that he was in the habit of using it, or even an occasional consumer. In cases of this nature I have never found the villagers backward in attributing lunacy to drugs if caused by them. Not long ago I came across a case seemingly similar to this, due, I was told, to a sunstroke. There is every reason to believe that this was the real cause in Ramanand's case, though, as the Superintendent of the Asylum has noted, it is perfectly possible that the use of bhang may have been the immediate predisposing factor.

DELHI LUNATIC ASYLUM.

(SUPERINTENDENT, DR. DENNYS, ON LEAVE.)

(Assistant Surgeon Mul Chand in temporary charge.)

Hemp Drug cases admitted during 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII.)	Type of insanity (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
1. Daya Lall; Hindu; Beggar; Hissar; 50; 207.	Charas	Toxic insanity.	Good...	The papers in this case are not forthcoming. The register shows that he was admitted 12th January 1892, and discharged on 12th July "cured."	No case book is maintained of any history of the patients in the asylum.
2. Nath; Hindu; Beggar; Jullunder; 25; 209.	Ganja	Toxic insanity.	Very bad.	This man's *Descriptive Roll* shows that he "has been seen in an insane state for a year" that he "has been addicted to ganja," and that the cause of insanity is "possibly ganja-smoking." He is of "filthy habits, talks incoherently, sings and weeps, does not answer questions, exposes his person indecently. Epilepsy or hereditary taint "not known." Admitted, 26th January 1892. Died, 3rd August 1893.	No asylum history was maintained. There was no *post-mortem* examination. The man died of heart disease.
3. Hari Ram; Hindu; Servant; Patiala; 18; 211.	Ganja	Toxic insanity.	Good...	The papers in this case are not forthcoming. The man was admitted on 2nd March 1892, he was discharged "cured" on 18th October 1892.	In the register this man's case is shown as "dementia"; this was entered by the Superintendent; and the Deputy Superintendent cannot explain how the case is shown as "Toxic insanity" in Statement VI.
4. Narain Singh; Hindu; Constable; Umballa; 30; 221.	Bhang	Toxic insanity.	Fair ...	This man's papers are not forthcoming. He was admitted on 20th April 1892 and died on 29th April 1892.	The register shows "mania" and the entry in Statement VI cannot be explained. There was no *post-mortem*. He died of remittent fever.
5. Charata; Hindu; Cultivator; Umballa, 27; 229.	Bhang	Toxic insanity.	Bad ...	This man's papers are not forthcoming. He was admitted on 11th June 1892 and discharged "improved" on 20th July 1892.	There is no asylum history. The register shows the type as "mania," and the entry in Statement VI is apparently due to the cause alleged in Statement VII, but Deputy Superintendent is not sure.
6. Sheri; Musalman; Mason, Hissar; 24, 236.	Ganja	Toxic insanity.	Indifferent.	This man's "*Descriptire Roll*" shows that this is a second attack, the first attack being two months before. This attack had lasted twelve days. The supposed cause is smoking ganja. No hereditary history of insanity. "Incoherent talk, using violence towards others, remaining filthy, indecent exposure of person, restlessness and want of sleep, maniacal look, giving wrong names of his relatives," are the facts given in the medical certificate. Also abuse and mischief.	There is no asylum history. The register shows the type as "mania." The entry in Statement VI is not explained. He was admitted, 26th July 1892, and discharged "cured," 28th December 1892.
7. Joseph Lalchand; Native Christian; Shoemaker; Delhi; 35; 240.	Charas	Toxic insanity.	Bad ...	The man was charged under section 380, Indian Penal Code, and as he talked incoherently, he was sent to the Asylum by the Deputy Commissioner. No facts are shown as known regarding his case, but the medical certificate says: "Is very noisy and violent at times, especially at night, and incoherent; at other times he appears quite rational. Is given to going about naked." Admitted, 18th August 1892; escaped, 12th September 1892; and re-admitted (*vide* No. 11 below) on 1st October 1892, and discharged "cured" on 27th June 1893.	The register shows charas as the alleged cause, the Deputy Superintendent says, because a Native Baptist Missionary said the man smoked charas. On the same ground the previous duration of the attack was entered as one month. The type is entered as "mania" in the register. There is no Asylum history.

Hemp Drug cases admitted during 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII.)	Type of insanity (Statement VI.)	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
8. Dhuman; Musalman; Weaver; Karnal; 30; 242.	Ganja	Toxic insanity.	Bad ...	His *Descriptive Roll* shows that this is the first attack and of four months' duration. The "supposed cause" is "by association with a faquir, named Gul Mahomed." "The mother of the lunatic was affected with insanity." The medical certificate shows that he "is unable to answer questions rationally. When asked his residence, names at different times different villages while he is actually a resident of Panipat. When asked his brother's name points to his blanket, keeps muttering and twisting his fingers and burst out laughing without apparent cause. Is sleepless and noisy at nights, considers dogs fit to eat. He pointed to a passing dog and said it was good eating. He has not, while under observation, been abusive or noisy. The police report that he tried to set fire to a thatched house, and that he threatens people and is abusive and mischievous." Admitted, 2nd September 1892.	There is no Asylum history of this man. The type is entered in the register as "mania," yet the case is included under "Toxic insanity" in Statement VI. This man was before us violent and incoherent, but said he used to take ganja.
9. Adhan; Hindu; Labourer; Karnal; 28; 243.	Charas	Toxic insanity.	Bad ...	The statement shows that this is a second attack, that the duration is three years, that the patient has been "for six months in the Meerut Dispensary and for one year in the Delhi Dispensary." The supposed cause is "drinking and smoking charas." Not subject to epilepsy. No hereditary history. The medical certificate shows that "he at times does not know his own name or residence . . . . or what caste he belongs to. Sits silent for hours or keeps moaning. Is filthy in his habits and goes about naked when he gets the chance. He has not been violent while under observation. The police say he throws stones at people and threatens to strike people and that he wanders into the jungle, also that he is a drunkard, and that he smokes charas which has affected his brain." Admitted, 2nd September 1892. Discharged "improved," 1st April 1893.	This case is entered as "dementia" in the register, but in Statement VI under "Toxic insanty." The register entries are said to be made after diagnosis in the Asylum. There is no Asylum history.
10. Nand Lall; Hindu; Cultivator; Delhi; 22; 246.	Charas	Toxic insanity.	Indifferent.	The "statement" shows that the attack was of ten days' duration and the cause "not known." His relations reported at the Naugloi Police Station that he was insane. The medical certificate of 22nd November 1892 says: He is very noisy and abusive, tears up his clothes, and is quite incoherent in his language. Admitted, 23rd September 1892.	There is no Asylum history. But the register shows that he had been admitted on 6th August 1892 and discharged "cured" on 27th August 1892. The cause is entered as "unknown" and the type as "mania." He was readmitted on 23rd September 1892 with the disease described as "mania," but now attributed to charas. He was discharged cured on 10th July 1893.

NOTES.—No. 11 is a re-admission (*vide* No. 7).

The number of admissions in 1892 (Statement VII) is 54 as follows:—

Criminal	Males	...	4
	Females	...	1
Non-criminal	Males	...	43
	Females	...	6
	TOTAL	...	54

Of these the above 11 are shown as due to hemp drugs; but as the eleventh case is merely a re-admission or re-capture of an escaped lunatic, the figures should really be 53 and 10 respectively.

The 6th October 1893.

Report of the Superintendent, Lunatic Asylum, Delhi, on the hemp drug cases of 1892.

In reply to your No. 149, dated 16th October last, forwarding a copy of your No. 148, dated 16th October, to the Revenue Secretary to the Punjab Government, together with two copies of its enclosures, I have the honour to inform you that I have instituted very careful enquiries into the past and present history of each of the ten patients admitted into this asylum during the year 1892, whose insanity was attributed to hemp drugs, and I beg to give herewith the result of my enquiries.

For facility of reference I am returning one copy of the list of patients forwarded with your letter under reply.

Full and satisfactory information has been obtained in cases 1, 9, and 10, and a copy of the reports in each of these cases is herewith forwarded for your information. I think there can be no doubt from a perusal of these reports that these three patients were typical and unmistakeable cases of toxic insanity due to the use of hemp drugs. Case No. 1 used to drink bhang in addition to smoking charas, while cases 9 and 10 only smoked charas. The last man, *viz.*, Nand Lall, was sent to me by the Deputy Commissioner for examination in November last, *i.e.*, about 5 months after his second discharge from the Asylum, and I had, therefore, the opportunity of cross-examining him very carefully myself. He was in the full possession all his faculties and was, in fact, a man of more than usual intelligence for a villager. His evidence, therefore, is particularly interesting. I remember this man very well on his first admission, to the Asylum. He was extremely noisy and abusive, absolutely incoherent in his speech, and could not be made to speak a single word of sense, tore up his clothes and insisted on going about absolutely naked, would not sleep, and was incessantly on the move. This was, as far as I am able to form an opinion, a typical case of toxic insanity due to charas-smoking and all the cases I have seen of insanity due to charas have been very similar to this one, though I cannot say that there are any symptoms *peculiar* to this form of toxic insanity. The man became rapidly better daily after his admission into the Asylum and was released 21 days afterwards apparently perfectly sane. He returned to his usual avocation of grazing cattle and again fell in with the fakir, who, in the first place, induced him to smoke charas. He again took to smoking charas, and within a month was as insane as ever and was brought back to the Asylum. On his second admission his recovery to his senses was not quite so rapid, but he was practically sane again 10 weeks afterwards, but as his too early release on the first occasion was attended with such disastrous consequences it was thought advisable to detain him in the Asylum for some months. On his second release I particulary warned him against having anything to do with the fakir and he promised me he would never smoke charas again, and the result has been that the man has remained perfectly sane ever since.

Cases Nos. 1 and 9 were both, as far as one can say, undoubtedly types of toxic insanity due to hemp drugs. Their symptoms were very similar to those of Nand Lall and they were both discharged quite cured from the Asylum, but from the enquiries made by the District Magistrates of Mozuffarnagar and Karnal, it appears that they have both taken to smoking charas again since their discharge and both were apparently more or less of unsound mind when last seen. The chances are that both these men, if they continue to smoke charas, will sooner or later become insane again, their mental condition depending, I fancy, a good deal on the quantity of charas they can afford to smoke daily.

Case No. 2, 'Nath,' died in the Asylum of mitral disease of the heart 19 months after his admission. This man's previous history has been very carefully enquired into by the Deputy Commissioner of Jalandhar, and from the information obtainable, there seems to be no doubt that he was a confirmed smoker of both charas and ganja. He had been insane for 4 months on a previous occasion and was admitted into the Jalandhar Civil Hospital, where he was treated and cured. Six months afterwards he again became insane and was sent to this Asylum. The man's symptoms on first admission here were very like those of toxic insanity, but latterly the case became more like dementia. He used to sit apart from the other lunatics, seldom spoke and then only incoherently, had lost all sense

of decency and for many months before his death his health was failing steadily as a result of heart disease. I think this was undoubtedly in the first place a case of toxic insanity due to charas and ganja-smoking, but, as is not uncommon in such cases, the man latterly became demented and had none of his original symptoms of toxic insanity.

Case No. 3, 'Hari Ram,' who was sent to the Asylum by the Deputy Commissioner of Karnal, cannot now be found anywhere, nor can any of his relations be traced either in Karnal or in Patiala State, where he was supposed to reside.

Case No. 4, 'Narain Singh,' who was a police constable, and was sent to the Asylum by the Deputy Commissioner, Delhi, was really a resident of Ludhiana. The Deputy Commissioner of the latter district, after careful enquiries, ascertained that the man, when at home, had never been in the habit of using hemp drugs in any form, and had never before been insane. This man, whom I remember well, was undoubtedly suffering from acute mania, and there was never any suspicion that the case was one of toxic insanity, but in the register the *alleged* cause was entered as 'bhang' by the Deputy Superintendent, for reasons I cannot explain.

Case No. 5, 'Charata,' has been seen and cross-examined since his discharge from the Asylum by the Assistant Commissioner of Rupar, and it has been ascertained both from him and from his brother-in-law that he had never used hemp in any form. It was, therefore, correctly entered in the register of this Asylum as 'Mania,' though in the column of alleged cause bhang was entered by the Deputy Superintendent, because this was said to be the cause in the papers sent with the man to the Asylum.

Case No. 6 has been enquired into by the Deputy Commissioner of Hissar, who has ascertained that this man, 'Sheri,' had never used hemp or intoxicating drugs of any kind, and that the cause of insanity entered in his papers by the Hissar Police was an error. Ganja was entered in the register as the *alleged* cause, but the case was correctly entered after diagnosis as 'Mania.'

Case No. 7, 'Joseph Lalchand,' was, I think, undoubtedly one of toxic insanity due to the use of charas, and the entry made by the Deputy Superintendent of 'Mania' in the register was wrong. This man not only admitted having regularly smoked charas, but there was corroborative evidence of the fact from some Baptist Missionaries who knew the man well. The symptoms too were those of toxic insanity. I regret to say no trace of this man can now be found.

Case No. 8 is still in the Asylum, but as he is unable to answer questions rationally, there is no use in cross-examining him. The Deputy Commissioner of Karnal has been trying to gather information about him from his relations, but up to date nothing has been ascertained. This case, I think, was correctly entered in the Asylum register as one of mania, and the case was erroneously included in Statement VI as toxic insanity. His symptoms are not those of toxic insanity, and the fact of the man having made no improvement whatever since he came into the Asylum more than a year ago is strong evidence against hemp having anything to do with his insanity.

Cases Nos. 9 and 10 have already been referred to.

It is as well for me to explain here that the Hemp Drug Commissioners, when they visited my Asylum in the hot weather during my absence on privilege leave were misinformed when they reported that no histories were kept up of any of the lunatics in this Asylum. It so happened that during the year 1892 several changes had taken place among the Deputy Superintendents of this Asylum and the man who took over charge from Mr. Bernard, the late Deputy Superintendent, had not been keeping up the histories properly and had also made several foolish mistakes in regard to the diagnosis of the cases by filling them up himself instead of consulting the Superintendent first. It was during this man's short tenure of office that all the mistakes and discrepancies found by the Commissioners occurred, but since his transfer the histories, &c., are all kept up properly as they are done in other Asylums. It is most unfortunate, of course, that these mistakes should have

occurred in those particular few cases about which the Commissioners were enquiring, and I am extremely sorry that they were overlooked by me till they were brought to my notice by the Commissioners. This Deputy Superintendent had been in the habit of returning the papers of all lunatics who were discharged or who died to the Magistrates who ordered their detention in the Asylum, hence the reason of there being no papers forthcoming in regard to several of the cases about which the Commissioners wanted information.

Case No. 1.—LUNATIC DAYA LALL.

1. What evidence is there to show that the patient was addicted to the use of hemp drugs?	1. The evidence of Daya Lall's relatives as well as of his neighbours proves that he was addicted to the use of bhang and charas before his becoming insane.
2. In what form was the drug used, and how partaken of?	2. In the beginning patient used only the pounded bhang moderately, but bye-and-bye he used it excessively pounded and mixed with dhatura and also smoked *charas*.
3. How long had the man been given to using the drug and how long after first commencing the habit did he become insane?	3. The patient commenced the use of bhang in the 15th or 16th year of his age; and after using it and charas for about 15 or 16 years he became insane.
4. How many times had he been insane previous to the occasion of his admission into the Asylum?	4. He had not been insane previous to the occasion of his admission into the Asylum.
5. What form did his mania assume before admission in the Asylum?	5. In the beginning his mania assumed the form of a mild character; the patient had left his house and was strolling about and sometimes it grew stronger and again resumed its former form, but did no injury to any body. In the end he became insane and was sent to the Asylum.
6. Has the patient used hemp in any form since his discharge from the Asylum, and has he shown any signs of mania again?	6. Yes; he has used drugs (bhang and charas) since his discharge from Asylum, sometimes moderately and sometimes excessively according to his means earned by begging. He is again not in his proper senses. Mania appears to have commenced, but in a very mild form at present.
7. What is the mental and physical condition of the patient at this moment?	7. At this moment the physical condition is not in proper order, for sometimes he acts and speaks like a sensible man, at others he talks foolishly, but does no injury to others.
8. Had the patient ever shown any signs of insanity or mental weakness before using hemp in some form?	8. No; patient had never shown any sign of insanity or mental weakness before using hemp.
9. With what object did the patient first commence to use the drug, for the pleasure of it or for the medicinal effects produced? If the latter, for what ailment was the drug used?	9. The patient first commenced to use the drug only for its pleasure and not with any motive or for medicinal effect.
10 Did the patient find the moderate use of the drug act as an aphrodisiac or the reverse? Does he consider the habitual use of hemp tends to cause impotency?	10. Owing to the patient not being in his proper senses, he is unable to give any reply to this question.

Case No. 9.—LUNATIC ADHAN.

1. What evidence is there to show that the patient was addicted to the use of hemp drugs?	1. Two persons named Ajudhia and Sahai of Karnal, neighbours of Adhan, depose that the patient was addicted to the use of charas.
2. In what form was the drug used and how partaken of?	2. Used to smoke *charas* in a *chilam* twice or thrice a day.
3. How long had the man been given to using the drug, and how long after first commencing the habit did he become insane?	3. For five or six years. He first became insane after one year's use; was treated and cured, but took to the habit again. Four years after he again became insane, and was then sent to the Delhi Asylum, where he was treated and cured.
4. How many times had he been insane previous to the occasion of his admission into the asylum?	4. Once before for five months.
5. What form did his mania assume before admission in the Asylum?	5. Before his admission into the Asylum he was entirely insane, was in the habit of running about naked and using abusive language, and had to be tied up in order to keep him in one place.
6. Has the patient used hemp in any form since his discharge from the Asylum and has he shown any signs of mania again?	6. Was discharged from the Asylum about eight months ago; uses charas occasionally, which, though heating to the brain, has not yet produced any signs of insanity.
7. What is the mental and physical condition of the patient at this moment?	7. Is emaciated in body and weak in brain.
8. Had the patient ever shown any signs of insanity or mental weakness before using hemp in some form?	8. Showed no signs of insanity before using *charas,* and was in good bodily condition.
9. With what object did the patient first commence to use the drug, for the pleasure of it or for the medicinal effects produced? If the latter, for what ailment was the drug used?	9. For pleasure and not for any medicinal effects.
10. Did the patient find the moderate use of the drug act as an aphrodisiac or the reverse? Does he consider the habitual use of hemp tends to cause impotency?	10. The use of *charas* was at first pleasing to the patient, but its habitual use is stated to have led to impotency.

Case No. 10.—LUNATIC NAND LALL.

1. What evidence is there to show that the patient was addicted to use of hemp drug?	1. He states that about five years prior to his becoming insane he had been in the habit of smoking *charas* mixed with tobacco twice a day.
2. In what form was the drug used and how partaken of.	2. He says he used to put a piece of charas, the size of a grain of gram, in a chillum and smoked it in turns with his companions.
3. How long had the man been given to using the drug and how long after first commencing the habit did he become insane?	3. See above.

4. How many times had he been insane previous to the occasion of his admission into the Asylum?	4. States that he had never been insane before taking to using *charas*.
5. What form did his mania assume before admission in the Asylum.	5. He was in a state of acute violent mania when admitted into the Asylum, was very noisy and abusive, refused to wear any clothing, and destroyed it when given to him, and it was impossible to get any rational answers out of him on any subject. He was twice admitted into the Asylum. On first occasion he was only about a month in the Asylum and was then released cured.
6. Has the patient used hemp in any form since his discharge from the Asylum, and has he shown any signs of mania again?	6. He says he returned to his usual avocation of grazing cattle and began smoking *charas* again, and in 20 days he was brought back with acute mania. He says there was a fakir whom he used to meet at a tank, where he was in the habit of watering his cattle, and it was this fakir who first persuaded him to smoke *charas*. On his release the first time he again met this fakir and was persuaded by him to resume the habit. The second time he came into the Asylum he was equally violent and remained more or less insane for about 10 weeks. It was not thought advisable, however, to release him for some time after he had regained his senses, so he was kept in the Asylum for 10 months and then discharged quite cured.
7. What is the mental and physical condition of the patient at this moment?	7. On appearing before me to-day (November 25th, 1893, having been sent by the Deputy Commissioner) he is perfectly rational and as sane as a man can be, and gives a full account of himself without hesitation. He is in good bodily health and is a well-made powerful man. Since the second release he has never been near the fakir again and has never smoked *charas*. He met the fakir once and told him of the injury he had done him by inducing him to smoke *charas*, and the fakir advised him to keep away from him in future, which he has done. He has given up his former occupation of grazing cattle, and now follows the plough.
8. Had the patient ever shown any signs of insanity or mental weakness before using hemp in some form?	8. No.
9. With what object did the patient first commence to use the drug, for the pleasure of it or for the medicinal effects produced? If the latter, for what ailment was the drug used?	9. He says he only took to smoking *charas*, because the fakir and others did so, *i.e.*, for society's sake and not because of any pleasurable effects it produced.
10. Did the patient find the moderate use of the drug act as an aphrodisiac or the reverse? Does he consider the habitual use of hemp tends to cause impotency?	10. He found the use of *charas* act as an aphrodisiac, and when he was using it he became almost impotent. His sexual passions have now fully returned.

LAHORE LUNATIC ASYLUM.

(SUPERINTENDENT, DR. W. COATES, ON PRIVILEGE LEAVE).

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from the registers and by inquiry from the Superintendent, &c.
1. Kadir Baksh; Mussalman, Beggar; Gujranwala; 25.	Ganja.	Toxic insanity.	Bad ...	This is a first attack. It is of two months' duration. The cause is said to be "religious ideas;" not epileptic, not suicidal. The medical officer observes that "he has a delusion that a woman is present before him, and he talks to her, becomes violent and abusive without any cause. Talks incoherent. Habits filthy. Goes naked and supposed to set fire to property and to strike people. Addicted to ganja." Admitted, 7th February 1892. Made over to friends, 14th January 1893.	On admission he was filthy in habits and incoherent. He continued "mad as before" until 6th November 1892, when he "speaks more sensibly than before, sings songs, and has playful habits." On 6th December he "is getting better, sings songs, and answers questions more sensibly." He is made over "to his father who is anxious to take him on security" on 14th January 1893. He was "improved," but not quite sane when discharged.
2. Mana Singh; Sikh; Cultivator; Amritsar; 32.	Bhang.	Toxic insanity.	Good...	This is a second attack. "First attack 12 years ago, after six months got all right, and last attack came on three years ago, and has continued with lucid intervals ever since." No hereditary history. Not epileptic; not suicidal; dangerous to others. The cause is shown as "contracted disease when on service in Afghanistan in 1878." Has received injury to the head. "He was stopped by a constable when attempting to make his way into the Court of the Sessions Judge, Amritsar, armed with a sharp and heavy gandasa with the deliberate intention of inflicting a serious injury on that officer." The medical officer observes that he "is morose and melancholic, at times inclined to be violent. Refuses food for days together; indifferent to personal cleanliness; at times dresses fancifully. Discharged from the army 12 years ago for unsoundness of mind." Admitted, 16th February 1892.	On admission he talked "pretty sensibly on simple subjects, but said that all people will become Khalsas and fight. Habits clean." On 15th March 1892, he was "quite quiet," but on 11th April "very mad." He continued excitable and subject to delusions up to 11th October 1892. He "is of excitable temper;" cannot be trusted. His type of insanity is religious. He was previously addicted to bhang. The later entries show that he thought his deceased father still alive and inciting the Asylum authorities to trouble him. On 21st March 1893 he "speaks rationally" and continues in that state until 28th July 1893, when he "speaks in a loud voice." Next month he is very talkative, and wishes to have a house built for him in the Asylum. In September 1893 he is "better and coming to his senses." This man was examined by us. He said "Sikhs do not smoke. They drink therefore; they take no charas, ganja, or tobacco. But they take bhang; took it occasionally, but never to excess or habitually. I have no wound on the head, but I had sunstroke. I used to get bhang at the temples or rest-houses, as I passed, to relieve me." This man is now considered sane and fit to make his defence.
3. Mahtab Din; Mussalman; Lahore.	Charas.	Toxic insanity.	...	This man was arrested on his father's petition and the representation of his neighbours as to his insanity that he was dangerous and could not be brought to court without help. "The lunatic talks pretty rationally; but as he tried to kill a child, as stated by his father, he must be kept under observation for medical opinion. The friends state that the man occasionally gets excited and dangerous. Is subject to fits of violence and uses bhang and charas." Admitted, 20th April 1892. Discharged, 29th idem.	On 25th April 1892 "this man has a peculiar depressed melancholic appearance, sits with his head bent forward, sings songs at the top of his voice, and suspects that other lunatics poke him." On the 27th April, he said "that his habit of drinking bhang and smoking charas is the cause of his present state. Has no fixed delusions and occasionally talks to himself of his luck." He was discharged on 29th April.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission	Facts ascertained from the papers.	Asylum history and facts ascertained from the registers and by inquiry from the Superintendent, &c.
4. Maula Dad; Mussalman; Gujranwala; 25.	Bhang.	Toxic insanity.	Extremely bad.	This is a first attack. Duration, not known. Supposed cause, excessive use of bhang. Dangerous to others. Epileptic or suicidal, not known. The medical officer says he "is talkative and incoherent, destroys clothes, goes naked, filthy in habits, refuses to eat his food and is destructive. In hospital broke bottles and articles of the dispensary." Admitted, 26th April 1892. Died, 4th May 1892.	On admission he "has scarcely strength left in him to do anything. Is extremely filthy; uses incoherent language; suffers from diarrhœa." He died of diarrhœa and debility on 4th May 1892, and there was no *post-mortem* examination because the cause of death was known.
5. Somirgir; Hindu; Beggar; Lahore; 50.	Charas.	Toxic insanity.	Good...	He lived at the temple on Rattan Chand's tank and became mad three days before, after taking charas. This the first attack. He is not epileptic; not suicidal Under observation (in the Asylum) he "answers questions reasonably, and is not filthy in habits (11th August 1892). Three days later he "ties ropes round his legs and says these have the power of curing all diseases. Gives foolish answers to questions and tears his clothes." Admitted, 11th August 1892. Discharged cured, 21st March 1893.	On admission he "goes on dancing and singing songs without being asked to do so, and laughs when there is no occasion to do so. On 17th September he began to improve and was declared sane on 21st January 1893, and made over to his friends as cured on 21st March 1893.
6. Mohna; Hindu; Lahore; 28.	Charas.	Toxic insanity.	...	This man was found taking up shopkeeper's baskets, throwing bricks at people and abusing them. He "smokes charas and takes opium." The medical officer says his habits are very dirty, he is very talkative, and tries to escape and fights with the warder on duty. Asks to be made a Christian. Admitted, 25th August 1892. Discharged, 25th May 1893.	This man was under observation in the Asylum before formal admission. On 17th September 1892 (a month after admission) he was "very abusive and talkative, mad." On 8th December 1892 "not so abusive as before, is less talkative, and less dirty." He goes on talkative, but improving until 7th April 1893, when he "speaks sensibly; suffering from secondary syphilis." On 24th May 1893 he is declared sane and is discharged next day.
7. Tehl Shah; Hindu; Beggar; Jullunder; 30.	Charas.	Toxic insanity.	...	Found wandering and abusing people, especially Europeans. Takes opium, bhang, charas, &c., &c; cannot give proper answer to questions put. Admitted, 27th August 1892. Discharged cured, 25th May 1893.	He was under observation before formal admission (27th August 1892). "He is very talkative and collects rubbish. Habits filthy. Blackens his face, &c." On 17th September 1892 "thinks himself to be a superior being to man." He is talkative, a little quarrelsome, childish, and noisy until 24th May 1893, when he is reported sane and discharged next day.
8. Mussamat Mooran; Mussalmani; Prostitute; Mooltan; 40.	Bhang.	Toxic insanity.	Fair ...	This is this woman's first attack. It has lasted three years. Cause, "use of bhang and death of her infant child." Not known whether she is epileptic. Not dangerous. The medical officer says, she does not understand remarks made to her fully. Her habits are filthy. At times speaks with violence and incoherence. Not suicidal; not epileptic. Addicted to the abuse of bhang. Admitted, 2nd September 1892. Discharged cured, 11th May 1893.	On admission "this woman answers simple questions well, and is not filthy; works well, spins fine, and is very quiet." She continues much in this state until she is declared "apparently sane" on 21st January 1893. She remains so until her discharge in May.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from the registers and by inquiry from the Superintendent, &c.
9. Ida; Mussalman; Banjara; Lahore; 25.	Charas.	Toxic insanity.	Indifferent.	This is the first attack. Its duration is since one year. Cause, smoking charas and using bhang, is violent and dangerous to others. His brother was also insane. The medical officer says he is of filthy habits, tears off his clothes, and gives unreasonable answers to simple questions, using incoherent language. This man had been in the Asylum before for mania, and was discharged on 10th April 1892 (cured). Admitted, 25th September 1892.	This man was under observation in the Asylum before formal admission. On admission he "is very talkative and noisy, tears off his clothes, and has dirty habits; eats and drinks well." On 6th November 1892 he "talks to himself but works." On 8th December he "sits quietly and is melancholic" On 21st January 1893 "answers questions sensibly, but is a weak-minded man." He continues very much the same until he is discharged as sane on 19th April 1893. On referring to the register regarding his first admission (1st March to 10th April 1892) it is found that the cause of his insanity was regarded as "not known" by the Magistrate; that his brother had epilepsy, and that the Asylum authorities treated the case as one of "mania," not toxic insanity.
10. Subhan; Mussalman; Beggar; Gurdaspur; 35.	Charas.	Toxic insanity.	Good...	This man threw stones at people. The duration and cause of this attack are "not known." He is noisy and abusive; wanders from home. The medical officer says, he is very talkative and noisy; abuses people without reason; sings songs at the top of his voice. This man has been here before for mania, and was discharged cured on 28th March 1881. The cause is ultimately entered by the Magistrate as "excessive smoking of charas." He "is epileptic, dangerous to others, not suicidal." Admitted, 29th September 1892. Discharged, 15th February 1893.	This man had been under observation in the Asylum before formal admission. When formally admitted he "answers simple questions sensibly, but when talked to on a certain subject for some time he begins to use disconnected words. Always goes on talking to himself. Not filthy. Sings songs loudly." He began to improve on 6th November 1892, and was said to "appear sane" on 21st January 1893. He continued so until his discharge "cured" on 15th February 1893. As records only began to be kept in 1881, there is no record of this man's previous attack.
11. Dullo; Hindu; Mendicant; Gujranwalla; 25.	Charas.	Toxic insanity.	Good...	This attack lasted four months before admission. Its cause was "use of charas." Not epileptic; not suicidal. Not known to be dangerous. It is not known whether this is the first attack. The medical officer says he is naturally affected; has mental aberration now and then. He talks of unconnected subjects and is fond of singing; laughs without cause, is generally mirthful. He neither cares for company nor shuns it. Is delighted in nakedness. Is often destructive to clothes. Likes nearness of fire, and has been seen on many occasions to handle it. Has set fire to his father's house. Is not filthy. Admitted, 21st October 1892. Discharged, 26th May 1893.	On admission he did not appear to be filthy; talked sensibly, answered all questions reasonably; gave his residence and parentage correctly. Did not seem quarrelsome. On 6th November 1892 he was working, and apparently rational, and remained in this condition until 26th May 1893, when he was sent back to Gujranwalla to stand his trial.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from the registers and by inquiry from the Superintendent, &c.
12. Jinda Shah; Mussulman; Beggar; Dera Ismail Khan; 25.	Bhang.	Toxic insanity.	Fair ...	This is this man's first attack. It began in January 1892. The cause is "unknown." The man is addicted to bhang. It is not known whether he is epileptic. He is not suicidal. He is dangerous to others. He was charged with striking a constable with a stick. The medical officer says "he is violent, talks incoherently, and uses abusive language; dirty in habits, fond of going about naked. He dug up the ground in his cell and threw the dirt over other prisoners through the grating; constantly shouting and making a noise; has used violence on warders and broken several pairs of handcuffs." Admitted, 17th November 1892.	On admission "this man has a peculiar wild look, uses abusive and senseless words, answers questions disconnectedly." On 8th December 1892 he "is quarrelsome and fights with other lunatics; has to be kept locked up." On 22nd March 1893 "has a peculiar melancholic appearance." On 8th April 1893 "dirty in habit, eats everything whatever he finds, as grass, wood, &c." He remains "mad" and "quarrelsome" until 25th August 1893, when he "is quieter and answers questions rationally." On 22nd September 1893 he is "melancholic and anæmic." This man is still insane and unreliable; but it may be noted that he stated to us that he likes, and has used, liquor, opium, bhang, charas, and dhatura. He took them all for the sake of intoxication.

NOTES.—(1) As the papers in the cases of lunatics discharged are returned to the Magistrates, the only papers we saw were those of Mana Singh (No. 2) and Jinda Shah (No. 12). The entries "from the papers" in all the other cases are taken from the Asylum abstract. It is to be noted that this absract was found defective in one or two important points in the cases of Mana Singh and Jinda Shah.

(2) It would be specially interesting to ascertain more of the history of Mussammut Mooran (No. 8); as the abuse of hemp drugs by women has rarely been found connected with insanity.

(3) The above cases, twelve in number, are all the admissions of 1892 ascribed to hemp drugs in Statement VII and entered under "Toxic insanity" in Statement VI. The total number of admissions was—

Criminal	Males	...	23
	Female	...	1
Non-criminal	Males	...	43
	Females	...	11
	TOTAL	...	78

It was to be regretted that the Superintendent was absent; but the cases will be sent to him and an expression of his opinion invited.

The 14th October 1893.

Report of the Superintendent, Lahore Lunatic Asylum, on the hemp drug cases of 1892.

I have the honour to forward copy of the inquiries made by the Magistrates, etc., into the previous history of each of the patients admitted to the Lahore Lunatic Asylum in 1892, whose insanity was ascribed to hemp drugs, with my brief notes thereupon, as called for in your No. 149 of 16th October 1893.

1.—Kadir Baksh.

Kadir Baksh, a man of 25, is said to have been a user of hemp in the forms of bhang and charas, and some of his fellow-villagers say he used opium also. There is no other cause of his lunacy even hinted at by any of the persons who inquired into his case. He was eleven months in the Asylum, and was discharged improved. He has remained well since his discharge on the 14th January 1893.

It appears to be a case in which the use of hemp drugs really caused insanity in a man not predisposed to it. The case was one of toxic mania.

LAHORE; W. COATES, M.D.,
The 31st January 1894. *Superintendent, Lunatic Asylum.*

In the case of Kadir Baksh, son of Makhna-Merasi, resident of Jalalpur Batthian, the history is as follows:—

This man admits having been used to bhang, but denies ever having smoked charas; his statement is not to be relied on. There is no doubt that he was insane and that the insanity was due to the use of hemp drugs of one sort or another, more likely to be *charas* than bhang. He denies having ever taken opium or smoking it. The man was discharged from the Asylum at Lahore on 17th January 1893. He is now perfectly sane.

The father, when examined, upheld the son's statement that he used bhang, but not charas.

The father is not addicted to any intoxicating drugs.

Enclosures to your letter under reply are returned.

GUJRANWALA; R. CROSSLEY,
The 16th January 1894. *Civil Surgeon.*

Tahsildar's report on the previous history and cause of insanity of the (late) lunatic Kadir Baksh, son of Makhna, of Jalalpur Batthian, Tahsil Hafizabad.

I examined the late lunatic Kadir Baksh, his father Makhna, as well as Lambardars of Jalalpur Batthian. Kadir Baksh, who is at present perfectly sane, stated that he was addicted to the use of bhang, but denied having ever used charas or opium; his father, Makhna, upheld his statement, and further stated that none of his relatives ever used intoxicating drugs. But the Lambardars of the village, who had no concern whatever, asserted that Kadir Baksh was in the habit of taking opium and smoking charas in addition to the use of bhang, and that they ascribed his lunacy as the result of these drugs.

I am also of opinion that the mere indulgence in these drugs is proved to be the cause of Kadir Baksh's insanity. He says Kadir Baksh and his father, through fear or somehow or other, have not disclosed the truth.

2.—Mana Singh.

In the case of Mana Singh the cause of insanity seems to be indulgence in bhang-drinking. From Dr. Mulroney's report, however, it is seen that his mind and temper were in youth uncertain and unstable, so that it may be that the use of bhang was only the exciting cause and acted on a brain already predisposed to disease.

The man is still in the Asylum, and his case is one of mania pure and simple. I regard him as a patient that is most unlikely to recover. I am inclined to call the case one of heredity.

LAHORE; W. COATES, M,D.,
The 31st January 1894. *Superintendent, Lunatic Asylum.*

From enquiries the following facts relating to past history of Mana Singh, son of Golab Singh, of village Dhotian, Thana Sirhali, were obtained from Sunder Singh, son of Khuta Singh, and Lal Singh, son of Buta Singh, and Sarup Singh, son of Ram Singh. Lal Singh's father and Mana Singh's father were cousins from the father's side, and Sarup Singh is head Lambardar of Mana Singh's village. The latter also is distantly related to Mana Singh and has known Mana Singh from infancy.

Sunder Singh's father was brother to Mana Singh's father, and his mother was sister to Mana Singh's mother. He and the others affirm that none of his relatives, as far as his recollection carries him back, were ever of unsound mind or touched in the head in any way. He and the others affirm that they were children together with Mana Singh, and grew up together to manhood in the same village. They did not notice any peculiarity in Mana Singh's manner during boyhood, nor was he excitable or given to outbursts of temper.

He was noticed particularly to be of a mild quiet and timid disposition. His mind up to enlisting in the 29th Punjab Infantry, 15 years ago, was perfectly sound. His father was Subadar in the 29th Punjab Infantry. He went with his regiment under his father to the Afghan War in 1878 and returned to Agra in 1880. While in service he became insane and was treated regimentally. A short while after he recovered his sanity and continued well till his return to Agra, when he obtained leave for three months. A few days after his return to his home he became raving mad, for which he was treated by a hakim. Three weeks after he broke loose from confinement and joined a fakir's establishment at Tallagung. It seems his regiment was stationed at Tallagung before going on service in 1878, where Mana Singh became acquainted with this fakir, and at that time his father, who was a Subadar in the regiment, noticed that Mana Singh was going to the bad, and had taken to bhang *drinking* at the fakir's place.

The father always ascribed his son's altered manner and attacks of temporary unsoundness of mind to indulgence in bhang drinking. He was two years in service, where he could not indulge so freely or so often in bhang, and only suffered once from unsoundness of mind. On his return to India in 1880 he took to bhang drinking again, and on his return to his village on leave in 1880 he indulged in it pretty freely, and was a constant visitor at the different fakir's houses in his own village and in the villages round about, where he freely indulged in bhang drinking. A month after his return home he became insane, and has remained so ever since. Neither his father nor any of his relatives have ever indulged in *Cannabis indica* (bhang).

BHUGWAN DAS,
Magistrate, 1st class, Amritsar District.

T. R. MULRONEY,
Surgeon-Major, Civil Surgeon, Amritsar.

3.—*Mahtab Din.*

It appears from the statement of the only relative of this man that could be found that his lunacy was caused by indulgence in both alcohol and hemp (bhang), and that these were only used two or three months before the attack of lunacy came on. The information is indefinite, and it is impossible to say what share in the production of insanity should be attributed to each drug.

There is no history of madness in the man's family.

The attack was a short one; he was only 14 days in the Asylum, but ever since his discharge he has been seen from time to time and is decidedly melancholic. The history, cause, and duration of the case are all very indefinite, and I think no deductions can be drawn from it for the purposes of this inquiry. The form of insanity remains doubtful.

LAHORE; W. COATES, M.D.,
31st January 1894. *Superintendent, Lunatic Asylum.*

Abdus Suttar, a relative of Mahtab Din, who has been an inmate of the Lunatic Asylum in 1892, states that the man used to take sharab and charas two or three months before the attack of lunacy. One day he took a large quantity of sharab and also smoked charas more than usual. The charas affected his brain, and he became lunatic. He used force in order to go out. He liked solitude. His father or mother never had an attack of lunacy. His parents had to put him in chains for one day. He did no injury to anybody nor abused any one; occasionally used to talk at random: never committed nor attempted to commit incendiarism. He liked to remain silent. Deponent cannot say whether he had a melancholic temper; never refused eating and drinking. Never remained naked nor ever been subject to epilepsy; never received any injury to his head; only once had an attack of lunacy; never had it afterwards. He is now in the habit of keeping his head and eyes downward; has given up the habit of inhaling charas. He performs his household work as usual. His father never took opium or any kind of intoxicating things.

The man (lunatic) still keeps his eyes fixed downward, and he does not lift his eyes until required to do so specially.

LAHORE; F. S. JAMALDIN, KHAN BAHADUR,
18th December 1893. *Magistrate, 1st class, Lahore District.*

4.—Maula Dad, 25 years.

This man was admitted to the Lunatic Asylum apparently in the last stage of exhaustion from mania and diarrhœa and died a week after admission.

The only witness that was found to tell anything of his history stated that he was not a consumer of bhang, charas, or opium.

There is no proof that he was, and it is impossible to say what grounds there were for attributing his insanity to bhang. I cannot even guess what form of insanity was present.

LAHORE; W. COATES, M.D.,
31st January 1894. *Superintendent, Lunatic Asylum.*

Report of Tahsildar, Wazirabad, regarding the late lunatic Maula Dad.

Khawajdin, Lambardar of Nalerke, stated that Maula Dad was never a lunatic; three years ago he left his village and provided a home for himself with his father-in-law in Pipli, a village in Tahsil Daska, District Sialkote. Maula Dad and his father, Mubarik, were in the habit of smoking tobacco, but they never used bhang or charas or opium. They never suffered from tobacco. The Lambardar stated that no other person bearing such a name and parentage than this was a resident of his village.

5.—Somirgir.

No information could be got about this case by the Magistrate deputed to inquire. From the information supplied when he was first sent to the Asylum and some gleaned otherwise it seems that he was a religious mendicant and smoked charas largely.

He was admitted in August 1892 and discharged cured in March 1893—eight months' detention. He has remained sane ever since and is said to be at Hardwar at present.

His lunacy may have been due to hemp, but this is by no means certain; religious excitement may have produced it, partly at all events.

LAHORE; W. COATES, M.D.,
31st January 1894. *Superintendent, Lunatic Asylum.*

Somirgir is stated to have left Lahore some time ago and his whereabouts are not known.

LAHORE; F. S. JAMALDIN, KHAN BAHADUR,
18th December 1893. *Magistrate, 1st class, Lahore District.*

6.—Mohna, Hindu, aged 28.

Was discharged cured from the Lunatic Asylum in May 1893; he himself gives a very clear account of his illness and attributes it entirely to charas smoking.

There is no family history of insanity and it seems clear that the charas was the cause of the illness.

The man is now said to be quite sane.

A case of toxic insanity.

LAHORE; W. COATES, M.D.,
31st January 1894. *Superintendent, Lunatic Asylum.*

Mohna, son of Narain Singh, Arora, late a lunatic in the Lahore Lunatic Asylum.

This man is now perfectly sane. He states that in 1886 he went to Rindli, in the Quetta district. While there, in consequence of the intense cold and watering of the eyes, he first began to take opium. He never exceeded half a pice worth, or 6 grains daily. He returned to his home in Wazirabad in 1891 and remained there for a few months, when he went to Lahore. He suffered no inconvenience from taking opium.

While at Lahore, where he remained for two and a half months engaged in selling milk, curd, etc., he got into the habit of smoking charas, on which he spent half anna a day. Under the influence of charas he quite lost his senses and was admitted a lunatic in the Lahore Asylum on the 25th August 1892, and remained there until the 25th May 1893, when he was discharged cured. He has not taken to the drug again, neither does he take opium now.

His father being a Sikh did not smoke charas; neither was he addicted to any other kind of drug.

His maternal uncle used bhang for 10 or 12 years, but did not suffer any inconvenience from its use; he died from cholera in 1892 on his way to or from Hardwar.

———*Tahsildar,*
of Wazirabad in the Gujranwala District.

R. CROSSLEY,
16th January 1894. *Civil Surgeon, Gujranwala.*

7.—Tehl Shah, Suthra Fakir.

His insanity seems to be distinctly traceable to indulgence in narcotic drugs—opium and hemp both as bhang and charas; he also had syphilis when he was about 25 years of age; he is now about 35. His insanity began probably three years ago. Though hemp was probably the exciting cause of his insanity, it is impossible to say that other probable causes were absent, and so the case is not of much use for the purposes of the Commission's inquiry.

The man has remained sane since his discharge in May 1893: probably a case of toxic insanity, the poisons being opium and Indian hemp.

LAHORE; W. COATES, M.D.,
31st January 1894. *Superintendent, Lunatic Asylum.*

Narain Das, a resident of Khem Karan, states that Tehl Shah, a resident of Phagwara, Jullunder district, came to Khem Karan some time ago, and used to drink bhang and smoke charas profusely. He became subject to a boil on leg and was admitted in the hospital at Kasur, where he became insane and was sent to the Lunatic Asylum; that ever since his return from Lahore he is all right in every respect.

Tehl Shah himself admits that he used to drink bhang, smoke charas, and take opium profusely, and one and a half years ago he became insane, as an effect of these, and that ever since his return from the Asylum he is in perfect senses. None of his parents had ever had an attack of insanity.

F. S. JAMALDIN,
18th December 1893. *Magistrate, 1st class, Lahore District.*

8.—Mussamat Mooran, aged 40.

Said to be a prostitute and addicted to bhang; was admitted to the Lunatic Asylum in September 1892 and discharged cured in May 1893. There are other possible causes for her insanity, *viz.*, grief and a hard life, but on the whole the evidence seems to point to the use of hemp as the real cause of the insanity.

LAHORE; W. COATES, M.D.,
31st January 1894. *Superintendent, Lunatic Asylum.*

Dated Shujabad, the 26th November 1893.

From—TIKRAN LAL, Extra Assistant Commissioner, Magistrate, 1st class,
To—A. MEREDITH, Esq., Deputy Commissioner, Mooltan.

IN accordance with your order of the 17th instant, I went to Shujabad on the 25th instant, and made a local enquiry into the case of a lunatic called Mussamat Mooran.

2. From the statements of several persons who appeared before me and gave evidence, I find that Mussamat Mooran is originally a resident of village Giddarwala, Tahsil Allahabad, in the Bhawalpur State, and came and settled in Shujabad about 22 years ago. She was then in her sound health; she lived at Shujabad as a prostitute for about five or six years and was addicted to drinking bhang and sometimes liquor. She gave birth to a male child during her residence at Shujabad, which died when it was six months old. Six months after the death of her child she left Shujabad, and nobody knows where she went, but she was seen by Muhammad Hayat, witness, at Mooltan one year after her departure from Shujabad. Muhammad Hayat says that even then she seemed to be of sound mind. After two or three years' absence from Shujabad she returned there as a lunatic. Nobody can precisely say from his personal knowledge that how and where she became insane. However, it is clear from the evidence that she was subject to fits of irritation while under the influence of bhang before her leaving Shujabad. I think that the evidence of Kadir Baksh is most reliable, because he was on most intimate terms with Mussamat Mooran and was with her for days and nights together, and consequently in a better position to observe her state of mind very closely. He also says that while under the influence of bhang she was sometimes very irritable and used to pick up quarrels for nothing and break her household utensils, but when without bhang she was never irritable.

From the evidence it is clear that opium is not the drug to which she was addicted, but the excessive use of bhang has, in my opinion, based upon the evidence before me, a great deal to do with the present malady, unless of course something is found out to trace this disease to some hereditary causes.

Nobody here knows anything about her past family history or even her past personal history before she came to Shujabad, as she does not originally belong to this place. In my opinion it is necessary to ascertain her past family history from the place to which she originally belongs. Originally this could have been done through some official of the Bahawalpur State ; but as from the facts disclosed it appears that she belongs to Dadpotra race, it is possible that the people of that place may consider it as a disgrace even to own her as a resident of that place, so I think the enquiry might be best made through the Tahsildar of Shujabad, who could quietly make it in a couple of days.

3. I saw the woman ; she talks incoherently. All that I could elicit from her was that her mother's name was Rahmat Khatun, her father's name was Kaim Khan, and her parents were landed proprietors in Mouza Giddarwala, in the Bahawalpur State, which is 2 or 3 miles from Allahabad, and that she was enticed away by one Sabban Jhakhar and brought to Adamwahan by him when Adamwahan bridge was under construction, and from thence she came to Shujabad. Her ancestors were sane and lived in prosperity. She says that two daughters and one son were born to her when she was in her husband's house, and one son was born here. All of them died. Most of the above replies were rational and are corroborated by other evidence.

9.—Ida, a wandering pedlar.

The only relation of this man that was produced says he did not drink, nor, as far as she knew, use hemp in any form.

It appears that the only ground for the statement that he did smoke charas and drink bhang was his own confession.

His brother is said by his mother to have been an epileptic and died in a Lunatic Asylum. From this it appears that while it is by no means certain that the man used hemp, it *is* certain that there was a family tendency to unsoundness of mind.

The man's own statement that he used hemp drugs I regard as of no value. A lunatic often answers a leading question in the affirmative without much regard to the facts of the case, and when asking a patient about his case the questions put are almost always leading questions.

The form of insanity is doubtful.

LAHORE ; W. COATES, M.D.,
31st January 1894. *Superintendent, Lunatic Asylum.*

The mother of Ida, late lunatic, named Mussamat Bhagan, states that about two years ago Ida was found, contrary to his habits, laughing exceedingly and fearing also. She took him to a native physician, who told her that Ida had become subject to melancholia on account of heat (garmi) and dryness (khuski), and that cooling medicines should be administered to him. Blood was also taken from his arm. He never drank sharab nor inhaled charas. His brother was subject to epilepsy, who had died in the Lunatic Asylum. None of the family of Ida had ever been subject to lunacy. Ida had become very timid, and used to talk at random while subject to the fit of lunacy. Ida was being tied with his turban whenever he became more violent. He never committed incendiarism nor would he sing or dance.

The deponent cannot say whether he used to take bhang or not.

LAHORE ; F. S. JAMALDIN,
18th December 1893. *Magistrate, 1st class.*

10.—Subhan.

Suhban, Mussalman, aged 40, a wandering beggar, was admitted in September 1892 and discharged in February 1893 cured.

His brother gave evidence about him, and says he did not use hemp in any form while at home with him : however, but little trust can be put in his evidence, for the patient had

been made over to him when discharged, and it is likely he would have considered himself culpable if he had allowed him to use bhang or charas. There is no family history of insanity. I do not think there is evidence enough to show what the cause of this case was.

LAHORE ; W. COATES, M.D.,
31st January 1894. *Superintendent, Lunatic Asylum.*

Statement of Gufara Kashmiri.—I live in Kila Teja, in Batala Tahsil. My brother's name is Subhan. I don't know if he is alive. He is older than I am—about 40 years of age.

He was entrusted to me from the Lahore Lunatic Asylum last Cheyet. He was well then.

He has been mad before ; it was by God's will he became mad. He did not use bhang or charas while he was at home ; he became mad then. I don't know why.

I am the youngest of four brothers—Sultan Baksh, Juma, Subhan, and Gufara, all sons of Jamal. Sultan Baksh and Juma are dead. I don't know where Subhan is now.

He remained with me for about a month, then he went to see a sister at Batala, who was ill ; then he didn't return. He was all right when he went there. None of our family uses bhang or charas.

Attested.

J. R. MACONACHIE,
16th December 1893. *Deputy Commissioner, Gurdaspur.*

11.—Dullo, a man of 25.

From the evidence or rather from the deductions drawn from it by the Civil Surgeon, Gujranwala, it appears that this man was vicious and addicted to the use of hemp drugs from his childhood. There is no family history of insanity, so it is fair to attribute his to the use of the drugs.

LAHORE ; W. COATES, M.D.,
31st January 1894. *Superintendent, Lunatic Asylum.*

In case of Dullo, son of Mya Das, Khatri, resident of Wazirabad, the following history is disclosed. Dullo while still a child got into the habit of smoking charas and madak. He led a wandering mendicant's life, stealing his mother's jewels and selling them for purpose of obtaining drugs, to which be became accustomed. After stripping his mother of all her property he took to begging and never set himself to honest work. The mother says she did not accustom her son to opium by giving him any when an infant. Dullo's father was in the habit of taking small quantities of opium, which, however, did him no harm ; he was not addicted to charas or bhang.

Dullo was sent to the Lunatic Asylum in October 1892, and was discharged in May last. He is still silly though not insane.

He is now a prisoner in the Gujranwala Jail and is quiet and well behaved, but he cannot resist grinning when spoken to and doing silly things at times.

———*Tahsildar,*
of Wazirabad in the Gujranwala District.
16th January 1894.

R. CROSSLEY,
Civil Surgeon, Gujranwala.

12.—Jinda Shah.

Jinda Shah, 25 years, a Mussalman beggar, admitted to Lunatic Asylum in November 1892 ; died of diarrhœa in November 1893. His brother gives a very clear history of the case, from which it appears that Jinda Shah was a confirmed user of Indian hemp in

the forms of charas and bhang since he was 18 years of age, *i.e.*, six or seven years. There is no family history of any such habit nor of any nervous disease. The case is one in which the insanity is clearly traced to the use of hemp.

LAHORE ; W. COATES, M.D.,
31st January 1894. *Superintendent, Lunatic Asylum.*

In the Court of Rai Banarsi Das, Magistrate, 1st class, Dera Ismail Khan District.

Enquiry into the cause of insanity of one Jinda Shah, deceased.

Statement of Imam Shah, brother of Jinda Shah, deceased, on solemn affirmation.

Jinda Shah, deceased, was my own brother. We were three brothers, Jinda Shah being the youngest. Our elder brother, father, and mother died long ago, so there is no other near relative of Jinda Shah now living. My father, mother, myself, and my elder brother never took any intoxicating drugs. We did not even smoke tobacco. Jinda Shah too up to the age of 18 years was not in the habit of taking any intoxicating drugs. He then associated himself with a fakir called Nur Shah, who was in the habit of using hemp drugs (*bhang* and *charas*), and who had been once sent to the Lunatic asylum at Lahore as a lunatic, but had been brought back by his brother after giving security for taking care of him. This Nur Shah is still alive, but is not in a fit state to answer any questions. We used to prevent Jinda Shah from going to Nur Shah, but he disobeyed us and went to him. After some time Jinda Shah fell into the habit of drinking the infusion of *bhang* as well as of smoking tobacco with Nur Shah. Soon after he left drinking the infusion of *bhang* and began to eat up the dregs of the bhang thrown away by men after taking out the infusion. He used to go about the streets, and wherever he found such dregs or refuse lying he used to take them up and to eat them without any regard to their quantity. After passing about 16 months in this state with Nur Shah, Jinda Shah became mad, and went about the streets naked, sometimes also assaulting people. He used to keep a wooden sword in his hand. In 1892 he assaulted a constable and was sent up before the Magistrate for trial. Then as he was found to be a lunatic he was sent to the Lunatic Asylum, Lahore. Before going to Nur Shah, Jinda Shah was perfectly sane, and we therefore infer that his insanity was caused by eating up the dregs of the bhang in large quantities. Neither our father nor our mother nor any one else in our family was ever a lunatic.

IMAM SHAH.
Examined by me.

BANARSI DAS,
Dated 21st November 1893. *Magistrate, 1st class.*

Statement of Ghulam Hyder, lambardar of the Mohalla, on solemn affirmation.

I live in the same street in which the house of Jinda Shah, lunatic, and of his family is situated. My statement is the same as that of Imam Shah, brother of the deceased lunatic.

GHULAM HYDER, *Witness.*
Examined by me.

BANARSI DAS,
The 21st November 1893. *Magistrate, 1st class, Dera Ismail Khan.*

Copy of a letter No. 435 of 24th November 1893, from the Civil Surgeon, Dera Ismail Khan, to Rai Banarsi Das, Magistrate, 1st class, at Dera Ismail Khan.

I beg to return you original letter No. 1652 with enclosures. It appears to me to be clear that Jinda Shah, lunatic, became insane from the excessive use of bhang and charas. I do not desire to further examine the witnesses Imam Shah and Ghulam Hyder, not expecting to elicit any further information.

JUBBULPORE LUNATIC ASYLUM.

(SUPERINTENDENT, DR. GAFFNEY.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement V!).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from the Superintendent.
1. Rathi Ram Singh; Hindu; Cultivator; Jubbulpore; 20; 189.	Ganja.	Toxic insanity.	...	The "memorandum" received with the order for reception shows that "he was apprehended in the Sihora Tahsil when he was entering houses and beating the women and children" The cause of insanity is "not known." Dr. Franklin (Civil Surgeon) certified that he "is noisy and talkative, does not sleep at night, but walks up and down the room throughout the night, destroys his clothing, habits dirty." (25th January 1892.) Admitted, 28th January 1892.	On 23rd February the register says that "for the last fortnight the man has been quiet and rational, works in the enclosure, is obedient to the warders, but quarrelsome with the patients." The next entry is dated October 20th and says that he "continues quiet and rational and gives no trouble." His friends are to be communicated with. His brother was written to on 13th December, but did not come in. The lunatic escaped on 25th July 1893, was to have been recommended for discharge at the visitor's meeting of 31st idem. There is an entry in the register of all the details of the statement with the words "addicted to the use of ganja" added, but no explanation of these words or authority for them.
2. Dalthaman Singh; Hindu; Police Constable; Jubbulpore; 32; 190.	Ganja.	Toxic insanity.	...	The "memorandum" states that he "was found wandering about the railway station and is said to have thrown his property out of the railway carriage in which he was travelling." The cause is not known. The medical certificate, dated 25th January 1892, says that he "will not answer questions, but rolls about on the ground crying; very dirty in his habits, sleepless, does not observe the customs of his caste, has to be fed by an attendant." Admitted, 28th January 1892. Discharged "cured," 12th April 1892.	On 10th February the register shows that he "was in a separate room until to-day, but as he is now quite rational, he is taken out and placed in association with other patients." On 23rd February it is stated that he "answers questions rationally, and says he was addicted to the use of ganja and bhang for eight or ten years." On 18th March the Superintendent says that as "the insanity was due to the abuse of ganja and bhang he may be made over to the care of his brother." He was released accordingly "cured." His statement above recorded is the sole ground for attributing the case to ganja; but it seems a reasonable explanation of the symptoms.
3. Umrao, Gond; Cultivator; Chhindwara; 32; 198.	Ganja.	Mania ...	...	The memorandum shows that this is a second attack and attributes it to "measles or ganja." But the statement of the case by the Deputy Commissioner of Chhindwara shows that the man was a prisoner in the Jail when he murdered a warder without provocation. He was committed for trial on 16th September 1891, but acquitted on the ground of insanity. Evidence was given at the trial that there had been insanity in his family. Admitted, 23rd March 1892.	On 23rd March his condition is as follows: "Does not answer questions put to him, but takes his food; to be carefully watched and kept in a separate room." On 10th August he attacked the warder while his cell was being cleaned out and seized him by the throat. Up to June 1893 there is "no improvement. He has not spoken a word since he came to the Asylum." Is dangerous and two men always enter together when he has to be attended to. He eats, sleeps, smokes, and makes no disturbance."
4. Udai Ram; Hindu; Tahsil Jamadar; Nimar; 50; 199.	Bhang.	Mania ...	...	The statement shows that this is a second attack. The first attack was a year ago and treated at Khandwa. "Used to be addicted to majum eating and ganja smoking." The medical certificate, dated 15th March 1892,	On 12th April it is recorded that he "sleeps during the day, but at night is violent, pacing his cell and shaking the chains of the door, continually singing and dancing, spits and throws dirt at the attendants."

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from the Superintendent.
Udai Ram—*contd.* ...	Bhang.	Mania ...	...	says: "He shouts and talks incoherently. Is abusive to those around him. He assaulted the hospital cook and the constable who was watching him. He suffers from tremulousness of all his muscles. His expression has become more excited and at the same time more drawn and careworn." He is said to be wild and violent, rushing on persons and trying to beat them. Admitted, 28th March 1892.	2nd June.—"Has become more troublesome of late." 20th October.—Very dirty in habits and eats his clothes. There is no improvement; but the man is now passing apparently into dementia and paralysis. It is said that his brother Gangaram is Municipal clerk at Barhanpur. He denies before us having ever used drugs, but he is a great wreck. The Superintendent sees no reason to asign bhang as the cause, except the police report.
5. Gulbia; Hindu; Labourer; Nimar; 45; 200.	Ganja.	Mania ...	...	The statement gives no explanation of the cause or circumstances of the attack. The medical certificate of 8th April 1892 says that he talks incoherently is filthy in habits and wanders aimlessly about, entering houses and carrying off anything he sees. Admitted, 13th April 1892.	On the 14th April he "says he was given ganja to smoke by some of his caste people. This made him mad for two months. They took him to the Doctor Saheb, who seized him and sent him here. He answers questions rationally and is in fair bodily condition." 10th May escaped, but was recaptured. Two other attempts to escape are recorded. He does not appear from the history to have been insane in the Asylum at all. He objected to be detained in a place meant for lunatics. He was discharged "cured" on 25th May 1893.
6. Hari; Bania; Shopkeeper; Saugor; 32; 209.	Bhang.	Mania ...	...	The statement shows that the present attack has lasted two years. The medical certificate of 28th June 1892 shows him to be incoherent, restless and sleepless. Nothing is known of the cause of the attack. Admitted, 8th July 1892.	On 29th July: "He is quiet and anxious to go home; says he was in the habit of drinking bhang occasionally and has smoked ganja when he went to Jagannath about twelve years ago. Has not smoked it since. Takes about 40 grains at a time." On December 13th it is recorded that "there is an improvement in his mental condition." There is no evidence whatever except the above recorded statement made by the lunatic that the insanity is due to drugs. The entry of cause was made after that statement. Before us he says that it was in the Holi 1½ years ago that he became ill. It was due to the bhang drunk and majum eaten then. Dhatura is sometimes used to increase the intoxicating power, especially at the Holi. He was suddenly seized with insensibility after partaking of bhang. There has been little sign of insanity since he came to the Asylum. He has been only a little hypochondriac and recently irritable.

NOTE.—The total number of admissions in 1892 was—

Criminal ...	Males ...	4
	Female ...	1
Non-criminal ...	Males ...	23
	Females ...	7
	TOTAL ...	35

Of these, the above six cases were attributed in Statement VII to hemp drugs.

2nd August 1893.

Review of the further enquiries by Brigade-Surgeon Lieutenant-Colonel J. B. Gaffney, Superintendent, Lunatic Asylum Jubbulpore, dated 22nd March 1894.

Case No. 1.—Rathi Ram Singh, Hindu, Cultivator, age 20.

This case has been investigated by Mr. Bose, 1st class Magistrate, who examined four witnesses at Saronda in the Sehora Tahsil, Jubbulpore. All that has been ascertained is that Rathi Ram Singh was born and lived at Saronda till he was about 17 years old. He was never known to have smoked ganja, but having left his village for three years, nothing was known of him till he came to Jubbulpore shortly before his admission to the Asylum on the 28th January 1892. On 19th December 1891 he was passed as candidate for police service as a constable, but on 14th January 1892 he was found wandering about the cantonment in an insane state.

The only evidence of his having smoked ganja was his own statement to that effect whilst in the Asylum.

His recovery having taken place within about three weeks of his admission to the Asylum would show that the disturbing cause was of but temporary duration, and so dispose to the conclusion that his statement that he smoked ganja was probably correct.

[NOTE.—The man has never been found since his escape.]

Case No. 2.—Dalthaman Singh, age 32, caste Chattri, occupation Police Constable, residence Busti, North-Western Provinces.

Report of District Superintendent of Police, Busti, is attached. No light is thrown on the case. Three of his brothers are sane. It is not said if they use ganja. Dalthaman Singh denied having smoked ganja or bhang, and had no recollection* of having admitted the habit when he was in the Asylum.

His recovery, like the last case, commenced in about three wekse.

* NOTE.—"He states that he does not remember doing so; and he may have done so while he was insane."

Case No. 3.—Umrao, caste Gond, age 32, occupation Cultivator, residence Chhindwara.

In this case the report of an Inspector of Police shows that on enquiry he learned that Umrao was given to the use of both liquor and ganja, which he indulged in daily; also that the uncle of Umrao was insane and had been a ganja-smoker.

The proceedings of the trial of Umrao are attached. The Civil Surgeon, Chhindwara, gives it as his opinion that "the cause of his reason having become affected was intemperance and the use of alcohol and ganja."*

Heredity may have been the primary cause, and the use of alcohol and drugs only secondary. The man was admitted to the Asylum in March 1892, and now (March 1894) is in no way improved. He has not spoken a word since admission.

* NOTE.—The Civil Surgeon said, "I should conclude from the history of the case given me by others that the cause of his reason having become affected was intemperance and the use of alcohol and ganja. His people say that the insanity came on after an attack of measles. It does happen sometimes that measles are followed by insanity. Possibly insanity was coming on gradually and measles accelerated it. It may be hereditary as his grandfather was insane."

Case No. 4.—Udai Ram, age 50, caste, Hindu, occupation Jamadar, residence Nimar district, Central Provinces.

Attached is a report of the Civil Surgeon of Khandwa. No local enquiry seems to have been held. The report states that "there is no hereditary history of insanity or nervous disease. The most important point elicited was that the man had been a ganja-smoker for many years, and latterly to excess. He was also addicted to bhang-drinking and majum-eating."

There is also history of syphilis. This man died of general paralysis of the insane on September 7th, 1893.

[NOTE.—A full account of this case is given in the following extract.]

From the evidence of Surgeon-Major Quayle (C.P. witness No. 37).

"Udai Ram, age 47, Tahsil Jamadar, Burhanpur, in which place he has lived for 20 years; caste, Chhipa.

History.—He was brought to Khandwa in February 1891 suffering from simple mania. His first symptoms were an increased excitability and irritability, he becoming very angry about trivial matters, abusing people without reason in the bazaars and interfering with their property, neglect of his duties. He commenced riding about the country on a pony, which he eventually lost. He was foolishly extravagant, purchasing useless articles at high prices. At Khandwa he was excitable and indignant at being kept under restraint and not allowed to go home. He was constantly in motion, walking round the station two or three times a day with his attendant, and at other times performing rather ludicrous gymnastic exercises. He was loquacious, talking to every one he met, sometimes incoherently, but at other times sensibly enough. One of his delusions was that he had been appointed "diwan" to a certain raja, and that he had boundless wealth at his disposal.

The man was transferred to the Jabalpur Lunatic Asylum at the end of March 1892. The Civil Surgeon writes that he died there on the 7th September 1893 of general paralysis of the brain, but that no *post-mortem* examination was made.

In this case there is no hereditary history of insanity or nervous disease. The most important point elicited was that the man had been a ganja-smoker for many years, and latterly to excess. He was also addicted to "bhang" drinking and "majun" eating, and of the latter substance about half a seer was found in his house. This majum he usually obtained from Ujjain.

The two causes, singly or combined, that are chiefly said to produce general paralysis of the brain among Europeans are sexual excesses and intemperance, especially if impure and bad alcoholic drinks are used; and there is no reason to suppose that Indian hemp consumed in excess might not play the part of alcohol in the production of the disease among the natives of India.

Case No. 5.—Gulbia, age 45, caste Hindu, Labourer, Nimar district, Central Provinces.

The Civil Surgeon of Khandwa made inquiries into this case. Gulbia's brother-in-law states that Gulbia, who worked with him as kotwar in the village, was accustomed to drink liquor whenever he could obtain it, but that previous to his becoming insane he did not smoke ganja or use Indian hemp in any form. He further states that even now he often remains days without smoking ganja. He is still insane. It seems unlikely that he should have contracted the habit of ganja-smoking after leaving the Asylum, had he not been accustomed to the use of ganja before his admission.

The man being now insane and using ganja,* after being discharged from the Asylum would go to show that the use of ganja was the cause of his insanity in the first instance, and the return of insanity on his resuming ganja-smoking.

* [NOTE.—Superintendent ignores liquor. The brother-in-law said: "Even now he often remains days without smoking ganja. His usual dose is two chillums per diem. Mohwa liquor he also drinks whenever obtainable."]

Case No. 6.—Hari, age 32, caste Bania, residence Saugor District, occupation Shopkeeper.

In this case no local enquiry could be made as stated by the Deputy Commisssioner of Saugor, as the man is a resident of Tikamghur State, where he now resides.

The Civil Surgeon of Saugor reports that there was no history of ganja-smoking whilst he was under observation in the Jail. He remembers the case well. He adds that "evidence as to ganja-smoking, &c., is always sought for by me" when lunacy cases are brought for observation to the Jail.

There is in this case no history whatever of the use of ganja or hemp drugs except the statement of the man himself. The man was discharged cured from the lunatic Asylum on the 29th November 1893.

NAGPUR LUNATIC ASYLUM.

(SUPERINTENDENT, DR. MCKAY.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
1. Atmaram; Hindu; Sowar; Nagpur; 35; 863.	Ganja	Mania ...	...	The statement shows that this man was "insane for the last seven years." "It appears that he was sane till he was sent to Jail when he was 20 years old. He got mad while he was in Jail for seven years. He was released from 10 or 11 years ago, and he has since been out of mind." "Supposed cause, perhaps the use of Ganja drug." The medical certificate of 23rd May 1892 says that he "talks great nonsense, has an idea he is a clever Railway Engineer. Is quiet; answers questions sensibly." Admitted, 28th June 1892.	The Asylum register shows that on admission the man was quiet and answered questions rationally. "7th July, weight 102 lbs. No mental change. August 15th, weight 102 lbs. Quiet, no change, destroyed a coat last week. September 19th, weight 102 lbs. Has had fever, quiet, occasionally talks nonsense. October 10th, weight 101. Talks nonsense; has still the same illusions. November 12th, weight 103 lbs. Still talks nonsense. December 22nd, weight 106 lbs. Complains of not having received his Jewellery or the pay for making the new mills or the Railway, his contract was for 5 feet of line a day. 1893, January 26th, weight 105. No improvement, is always making trains. Is very afraid that there will be an accident as he is not present at the station. Dementia. February 13th, weight 105½ lbs. No mental improvement 13th March, weight 103½ lbs No improvement. 27th April, weight 104 lbs. Quiet but no mental change. 15th May, weight 103½ lbs. The same delusions. 8th June, weight 100 lbs. Quiet. Hospital orderly. 13th July, weight 102 lbs. Quiet, no mental change. 10th August, 101 lbs. Became very excited and abusive on the 8th August." This man said to us that he smoked three chillums a day (two pice worth), which with tobacco came to Rs. 2 per mensem. He also took bhang in the hot weather. He says he took bhang about Rs. 3 (1·8 bhang and 1·8 sugar) in four months. He also drank liquor he says. He talked utter nonsense about his imprisonment. It is the routine (the Deputy Superintendent says) to copy at once the supposed cause from the papers received from D. C, and to enter the type after some time has elapsed and the case been diagnosed.
2. Tajodin; Mussalman; Sepoy; Nagpur; 30; 867.	Ganja	Dementia	...	The statement shows that the man was about five years ago under treatment in the regimental hospital, and that the cause of his insanity is "unknown." The medical certificate of 25th August 1892 shows that he had "vacant, wandering expression of face, rambling, incoherent talk, habits filthy. I am informed that Tajodin is a confirmed smoker of ganja." Admitted, 26th August 1892.	The Asylum register shows that when admitted in the end of August this man weighed 113 lbs. "September 19th, weight 115 lbs. Talks nonsense, refuses to take food, is very depressed. October 10th, weight 115½ lbs. Mutters to himself November 12th, weight 114 lbs. Is improving, but still very dirty in his habits. December 22nd, weight 118 lbs. Slight improvement, still dirty. January 26th, 1893, weight 114 lbs. Suffers from fever, no mental im-

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
2. Tajodin—*contd.*	Ganja	Dementia			provement, complains of want of food, gets extra rations. *Dementia.* February 13th, weight 113 lbs. Has been very excited since 26th January 1893. 13th March, weight 116 lbs. Always talks nonsense, no improvement. 27th April, weight 121 lbs. No mental change. 15th May, weight 122½ lbs. Always muttering, very depressed. 10th June, weight 124½ lbs. Very depressed and talks great nonsense. 13 h July, weight 129 lbs Very suspicious and troublesome, not to be trusted. 10th August, no change, always muttering." The man appeared before us muttering, and though he smiled as he said he liked ganja, he turned off at once into incoherent talk.
3. Itwargir; Gosai; Beggar; Amraoti; 24 854.	Ganja	Mania ...	...	The *Descriptive Roll* shows that this man was convicted on 14th October 1891 and sentenced to one year's rigorous imprisonment for theft in a building The certificate of the Superintendent, Central Jail, of 26th October 1891, says "He is violent and noisy as well as filthy in his habits. He is abusive and talks incoherently and senselessly." The Superintendent's letter of 27th November 1891, says that "the prisoner manifested signs of insanity since the date of admission on the 14th October and from that time he has been kept under observation in cells. His history is that of a ganja smoker. He has been noisy, torn his clothes repeatedly, been filthy in his habits, talked incoherently and suffered from insomnia since he has been admitted here. His general health has improved considerably, and he has gained 21 lbs. in weight." Admitted, 28th November 1891. Transferred to non-criminal list. } 15th October 1892	Before us this man said he used to take ganja regularly. It was food to him and he could work on it. He was also a gosain, and therefore ganja suited him. He had smoked from boyhood. He used tobacco with it, but no datura or anything else. He said he was not mad but had been imprisoned and also flogged (20 strokes) at Anjuni without cause. There are no marks on him. He never took opium or liquor. The Asylum register shows his weight on 19th November 1891 as 120 lbs. and on December 4th as 127 lbs. Is crying and wants to go home, and is much depressed. January 4th 1892, weight 119 lbs. Dull and apathetic always, and speaks very slowly and hesitatingly. Says that he smokes ganja. Is very destructive. February 1st, weight 122½ lbs. Is noisy towards the early morning hours During the day he is dull and quiet. March 3rd, weight 123½ lbs. Destructive. April 4th, weight 123 lbs. Excitable at times and assaulted a lunatic yesterday. May 2nd, weight 122 lbs., very destructive. June 2nd, weight 123½ lbs., noisy and destructive. Bromide potassium and ammonia. July 4th, weight 122 lbs. still very destructive. August 13th, weight 120 lbs. Destroyed 5 coats and 3 dhoties. September 14th, weight 121 lbs., very destructive. October 8th, weight 121 lbs, still slightly destructive. October 20th, sentence expired on the 14th October 1892; he is therefore placed on the non-criminal list. To be brought before the visitors for readmission. This man's sentence expired on the 14th October 1892 and he has consequently been transferred from the criminal to the non-criminal list from the 15th October 189 .

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from enquiry from Superintendent.
Itwargir—*contd.* ...	Ganja	Mania ...			*History.* See No. 854 of Criminal List. Weight on 8th October 1892, 121 lbs. November 12th, weight 116 lbs. Has had fever. Very destructive. December 22nd, weight 121 lbs. Very destructive. No mental improvement. January 26th, 1893, *mania*; weight 117 lbs. Smashed his finger on the wheel of the pump. Is not destructive. February 13th, weight 118 lbs. Improving. 13th March, weight 121 lbs. Is not destructive now. 27th April, weight 121 lbs. Quiet and hard-working. 15th May, weight 118½ lbs. Improved. 10th June, weight 119 lbs. Improving. 13th July, weight 123½ lbs. Greatly improved. 14th August, weight 124 lbs. Occasionally irritable.
4. Akbar Khan; Mussalman; Labourer; Nagpur; 50; 876.	Ganja	Mania ...	...	The statement shows that this man "has been a wandering lunatic for the past 6 or 7 months," and was arrested "on complaint made of his being a nuisance to the public." The supposed cause of his insanity is "ganja-smoking, &c." The medical certificate of 21st November 1892, says that he is "incoherent, noisy, and abusive, refuses to take his food, and talks nonsense."	The Asylum papers state that he was arrested for theft of a sewing machine and a piece of dhurrie, which he stated was his jhandi. "On November 21st he weighed 72 lbs. On December 22nd, weight 77lbs. Talks great nonsense, very noisy, and abusive. January 26th, 1893, weight 83 lbs. Very noisy, troublesome. *Mania.* February 13th, weight 85 lbs. Very noisy and abusive. 13th March, weight 82 lbs Very troublesome, noisy, and destructive. 27th April, weight 87½ lbs. Is in hospital, suffering from contused wrist. Is very noisy. 15th May, weight 95½ lbs. Hand better, very noisy. 10th June, weight 98 lbs., noisy and troublesome. Cannot be trusted. 13th July, weight 100 lbs. Very noisy, is only "12 years of age." 14th August, weight 103 lbs. Talks nonsense, is now quiet." This man ascribes his insanity to illness for which he had, issues or was blistered behind the ear. He calls it "Waba." He says he took ganja. He drank tari also. He had taken dhatura, but never in ganja.
5. Rudraya; Hindu; Chanda.	Ganja	Melancholia.	...	This man was brought to the Civil Surgeon, Chanda, on 10th October 1892. The police had found him sitting on the banks of the Andhari River. The ferrymen said he had been sitting there 48 hours without speaking. He was very violent and required three men to restrain him, talked loudly, used bad language to some imaginary person in front of him. For two or three days in the Jail he became very violent and noisy for a short time and then relapsed into silence. Admitted, 23rd November 1892.	The Asylum register shows this man as 108 lbs. when admitted. "On December 22nd, weight 111 lbs. Very depressed, was very violent for the first two days after admission, and tried to assault every one. January 26th, 1893, weight 114 lbs. Noisy, destructive. *Mania.* February 13th, weight 109½ lbs, very troublesome and dangerous. Became excited on the 9th February; refuses to take food. 13th March, weight 105 lbs. Has to be fed forcibly and is kept in a cell. 27th April, weight 106½ lbs. Is now quiet—*melancholia.* De-

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Aellged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
5. Rudraya—*contd.*	Ganja.	Melancholia.	...	.....	pressed, never speaks. 15th May, weight 109 lbs, very depressed. 10th June, weight 103½ lbs., very depressed, difficult to feed. 13th July, weight 101 lbs., very depressed, never speaks. 14th August, weight 111 lbs. Depressed, difficult to feed." This man before us was depressed and silent and would not converse.
6. Kalekhan; Mussalman; not known; Ellichpur; 30; 136.	...	Mania ...	...	The statement shows that the disease has lasted 9 months. The medical certificate, dated 26th April 1892 says, "The patient is a ganja smoker. He was sent to the Civil Hospital, Ellichpur, for treatment by 1st class Magistrate, Ellichpur, while found wandering at Anjangaon. This man was a private in the 1st Regiment, Infantry, H. C., stationed here; and for showing signs of insanity was discharged about six months ago. While in the regiment he had a habit of straying away towards the hills, and on one occasion was found after three days and brought in by a camelman. He is under the impression that he is some great man, and that all around him should pay him every respect. He stands motionless for half an hour at a time and then suddenly begins to laugh. His expression is meaningless aud altogether indicate signs of mental aberration. Admitted, 20th May 1892.	The Asylum register shows that on admission this man's weight was 113 lbs. Then on June 7th weight 117 lbs. "Will stand looking at the sky and suddenly break out laughing. July 6th, weight 122 lbs. Became excited on the 23rd when working at the 'chuki' August 18th, weight 118 lbs. Became again excited, very noisy. September 22nd. Has been in hospital, weight 114½ lbs. Has been quiet lately. October 13th, weight 114 lbs., very quiet, well behaved. November 14th, weight 115. Quiet and well behaved, works hard. December 29th, weight 122. lbs. Improving, wants very much to go home. January 20th, weight 123 lbs. Became excited on the 17th, sang and danced and laughed. *Mania.* February 16th, weight 121 lbs., again quiet. 16th March, weight 124½ lbs. Not been excited lately. 27th April, weight 131½ lbs. Is very depressed. 18th May, weight 120½ lbs. Very depressed, takes very little food. 15th June, weight 122 lbs., still depressed, will not speak. 15th July, weight 121½ lbs. Improved. 19th August, 121 lbs. Speaks occasionally." This man was inclined to be silent before us, and when he spoke he was quite incoherent, but respectful. Nothing rational could be got out of him.
7. Lachman; Gond; Labourer; Chhindwara; 52; 861.	Ganja.	Mania ...	...	The statement shows that this attack has lasted four years and that the suppo ed cause is ganja-smoking. The medical certificate of 4th April 1892 says that the symptoms were "incoherent conversation, absurd and unnecessary postures and gestures, weaving thin bits of string without any apparent object about the bars of his cell, general restlessness I have seen him perched on a flour mill absolutely naked." Admitted, 26th May 1892. Discharged, 25th March 1893.	This man was in this Asylum from 14th November 1867 to 3rd May 1868 and was discharged as cured. He was then entered as a case of Chronic Mania; and the "supposed cause" was shown as "ganja." On the present occasion he was discharged as "improved," not cured.

NOTE.—The total number of admissions for 1892 was—

Criminal	Males	...	5
	Females	...	...
Non-criminal	Males	...	18
	Females	...	4
		TOTAL	27

these, the above seven cases were attributed in Statement Vmp drug; but none of them was entered under Toxic insanity in Statement VI.

It was much to be regretted that Dr. McKay was quite unable owing to illness to leave his room or receive us when we visited Nagpur. It is to be hoped that we shall have another opportunity of discussing these cases with him.

Report of the Superintendent, Nagpur Asylum, on the hemp drug cases of 1892.

IN reply to your No. 2236 of 9th instant asking me for an expression of my own views with regard to the history of the cases of insanty admitted into the Asylum during the year 1892, and in which cases the alleged cause of the insanity was the immoderate use of ganja or other preparation of Indian hemp, I may be permitted to draw your attention to the concluding paragraph of my letter No. 21 of 27th January 1894, in which I expressly stated that I had not been able at the time of writing to formulate any decided opinion as to the mental condition and causation of the insanity of the cases admitted during 1892-93.

2. Since writing the above I have endeavoured to study the mental condition of the six insanes admitted during 1892 and still in the Asylum, in which the cause of the insanity is alleged to have been the excessive use of ganja taken in some form or other. I beg to submit a few brief notes and comments on these cases.

3. I may note that, although acute ganja intoxication and its detection, symptoms, &c., &c., are abundantly treated of in various medical works, I am not myself acquainted with any *recent* medical work which specifically treats of types of insanity which are especially attributable to the habitual use of ganja or any of the various preparations of *Cannabis indica* or *sativa* and the differentiation of the symptoms of these cases from other cases of toxic insanity (alcoholic, opium, &c.), and, therefore, when discussing the causation of the mental aberration in any given case in which a history, which may be true or may be exaggerated, of having taken some preparation of *Cannabis* at some previous period of their lives is obtainable or suspected, it is necessary to avoid being led away by the *post hoc ergo propter hoc* fallacy—I mean that, although it is, no doubt, exceedingly common to meet with cases of chronic insanity associated with the frequent or habitual use of ganja, it is not therefore sufficient to assume from this alone without the very clearest proof (which proof must exclude every other probable cause) that the man or woman is insane because he or she has taken ganja or bhang at some time in his life.

As a writer has pointed out, a list of the number of cases in an Asylum in which a history of ganja-smoking is alleged as a cause of the insanity in the papers sent with the lunatics often simply shows the number of lunatics in the Asylum who have used ganja at some period of their lives, moderately or immoderately, as the case may be, and the causal connection between the use of the intoxicant and the insanity is not readily demonstrable.

1. *Atmaram, Soonar.*—This man tells me that he has taken ganja since his father died, that is, about 9 or 10 years ago. He says that his father occasionally took ganja. His mother did not take ganja, but both his parents were in the habit of drinking "daru" or country spirit freely and habitually. An uncle (mother's brother) also was a heavy drinker. He himself cannot say why he commenced the habit of ganja-smoking, but his usual allowance was 2 chillums daily. In addition to the ganja-smoking he used to drink ½ bottle of "dobara" (or the 2nd distillation) daily. The average cost was 16 pice, and he says he drank it because he felt tired after his day's work. In the hot months he also used to drink bhang mixed with sugar, 1 pice worth of each, and by his own account he drank this concoction 3 times in 5 months. He has been in Jail for theft.

The papers that were sent with him when he was admitted into Asylum state that his insanity dates from the time he went to Jail, and the supposed cause is "perhaps the use of ganja."

Dajiba, a distant relative (cousin) of Atmaram, told the Magistrate who was deputed to make a special enquiry into the antecedents of these cases, that from an early age Atmaram was "given up to vicious habits" and that "he used to smoke ganja."

As a rule his behaviour in the Asylum has been good. Once (in August 1892) he was excited and destroyed a coat, and once again (in August 1893) he is said to have become very excited and abusive. Excepting on these two occasions he has not shown any violent or maniacal excitement.

His main delusion throughout has been that he is a successful Railway Engineer and has performed wonderful engineering feats (building railways and digging tunnels, &c.). Makes his own silver from "gitti" by heating it. Says that his pay was Rs. 1,006 per mensem and that he now has over Rs. 18,000 saved up. Calculates 32 days to the month and 15 months in the year. His physical health is fairly good; he usually is contented and cheerful. Patellar reflexy completely absent. Pupils somewhat contracted, and respond sluggishly to the stimulus of light and for purposes of accommodation; no marked tremor of tongue on protrusion; no distinct paralysis, but he is inclined to totter when he stands with his eyes shut and walks backwards very slowly.

His left hand shows a central thickening and discoloration of the palmar surface, somewhat towards the inner side, but no corn or callosity.

Here we have an instance of a condition of mental unsoundness owning, in my opinion, a very complex causality. Assuming that the facts of the family history and personal history obtained are trustworthy, we note first a history of alcoholic indulgence in both parents and in one uncle and a further history of ganja indulgence on the part of the father: and taking into consideration these facts, we are not surprised that his relative Dajiba states that Atmaram was given up to vicious habits from an early age.

It has been frequently observed that the offsprings of alcoholic parents show sooner or later some signs of mental instability, with not uncommonly some indications of a liking for narcotics and stimulants and the excitement they produce. We have evidence that early in his life Atmaram was a ganja-smoker, a wine-bibber, and a thief. There is no history of sexual excess and he himself denies it; but as ganja is a supposed aphrodisiac, his denial may be taken for what it is worth. With this history I think it not improbable that the habit of ganja-smoking was not only not the sole or chief cause of his mental aberration, but more probably one of its remoter consequences. In the same way his drinking propensities may probably be attributable to the same cause. Setting aside heredity for the moment and seeking for another cause, I can find nothing either in his mental condition and behaviour during his past life in the Asylum or in his present symptoms to justify the expression as to causation in the certificate—"perhaps the use of ganja." Why not "perhaps the use of alchohol"?

His condition in some respects, mental and physical, resembles an early condition of general paralysis of the insane. As a rule there is general condition of *bien être*. He has exaggerated ideas of grandeur, wealth, powers, and capabilities; his patellar reflexes are absent; pupil reflex is sluggish. In some cases excessive indulgence in stimulants and narcotics have been not uncommonly noticed as amongst the prodromata of general paralysis.

In this particular case the man freely admits to having used both ganja and bhang; but I am not on this account prepared, for the reasons stated above, to conclude that his insanity is solely attributable either to ganja or to the bhang which he has taken.

I am, however, quite ready to admit that a mentally weak-fibred individual with an unstable brain will always be further mentally enfeebled, whatever the narcotic or stimulants he indulges in.

2. *Tajodin.*—This man admitted to me that he used to take ganja two or three times daily and described how he prepared it. He said he rubbed it to powder in the palm of his hand, and washed it 7 times in water and then smoked it. The intoxicating effect used to come on at once. Says that he also drank "daru" and other kinds of alcohol daily. (His conversation was very incoherent, and it was very difficult and scarcely possible to keep him to the point.)

He says that he was discharged from the 8th Madras Native Infantry at Saugor.

The medical history states that "I am informed that he is a confirmed ganja-smoker." Nothing is given in support of this information, or whether the informant was a trustworthy person and one whose testimony was worthy of credence.

The special enquiry reports that his wife's brother states that he has been made for five years, that he has never shown signs of violence, that he has never drunk liquor or has been addicted to any intoxicant.

The supposed cause of insanity was disappointment in some love affair. He was in love with some *chamar* woman, whose husband is supposed to have given Tajodin some drug to smoke, and after smoking this he became insane.

He has never been violent since his admission. Incoherence of speech has been constantly present. He often refuses his food, and is mostly in a melancholic state. He became excited in January 1893. Is of a very suspicious disposition.

Knee-jerks completely absent; pupil reflex doubtful; no marked tremor of tongue, or signs of parlaysis of any part; is generally depressed and melancholic; has no sense of decency or cleanliness; rambles off incoherently when spoken to, and cannot keep to the point; there is a thickening of the skin of the inner side of the left palm.

In this case the history is contradictory and gives us very little help in coming to a distinct conclusion as to the cause of the mental aberration.

There is a history of ganja-smoking.
" " " " " alcohol-drinking.
" " " " " disappointment in love.

He says himself that he took both ganja and alcohol: his relative says that he was not in the habit of taking either alcohol or any narcotic drug. Obviously both statements cannot be true and in the absence of other confirmatory evidence, which is to be believed? This raises the whole question as to how much is to be believed in accepting the statements of a supposed ganja-consumer and how much rejected. Some lunatics are exceedingly cunning and will readily respond to, and if the expression be excused "play up to" any leading question. Others, on the contrary, are so suspicious that they will answer nothing, nor the simplest and most direct question, always suspecting a trap.

The absolute disregard for veracity shown by dipso-maniacs and morphino-maniacs is notorious, and I am inclined to believe that the same disregard for facts and reliance on imagination is also to be met with in the subjects of what Dr. Hutchinson, the late Superintendent of the Patna Asylum, calls "Cannabism." Did his ganja-smoking propensities develope subsequent to the disappointment in love? I should feel inclined to look upon the case as an ordinary case of melancholia, which will probably go on to dementia in the course of time, and although disappointment in love, alcoholism, and persistent ganja-smoking may each and all have helped to bring about his present condition, yet I cannot, with the doubtful history given, disassociate one exciting cause from the other two, and say definitely that this is a case of insanity traceable to ganja.

3. *Itwargir, Gosain.*—Convicted on 14th October 1891 for theft in a building and sentenced to one year's rigorous imprisonment. The Superintendent of the Nagpur Central Jail in October 1891 reported that he was violent, noisy, filthy in his habits, abusive and incoherent, also that his history is that of a ganja-smoker, that he has torn his clothes repeatedly, and that he suffered from insomnia.

The man told the Ganja Commission that he was in the habit of taking ganja regularly. It was food to him and he could work on it. Never took opium or liquor.

In the Asylum he was frequently crying and was depressed, dull, and apathetic; told me in January 1892 that he took ganja. Was destructive and noisy at night. At times was excitable, and assaulted a lunatic on the 3rd April 1892. Continued to be troublesome and chiefly of very destructive propensities until April 1893, when he showed signs of mental improvement.

The magisterial special enquiry states, on the testimony of one Heragir, a cultivator, who had known Itwargir for several years, that Itwargir was made a gosain when he was

10 or 12 years old, and that "from his youth he was wild." He used to smoke ganja and go about begging, was turned out of Hamadpur for being a bad character; "he was a terrible smoker of ganja."

Another religious mendicant or gosain, by name Harigir, also testified to the fact that Itwargir was a habitual ganja-smoker and that his moral character was bad, &c., &c.

In this case there are no details of the family history to help us, and we are driven to frame an hypothesis as to the supposed sequence of events which led up to the insanity. We have not improbably an instance of wild, dissipated, and misspent youth, coupled with a highly excitable temperament, and an ill-balanced mind, rendered more so by religious excitement, and the life of a gosain. Assuming the probable truth of this history, and the existence of this excitable temperament, it is not difficult to further conjecture that the free and habitual use of ganja completed the mental unrest, and was sufficient to overthrow the scanty remains of reason, and set up a condition of melancholia with excitement (the active melancholia of Dr. Savage). Although in the absence of any particulars about his family history I am not prepared to state positively that the insanity in this case is clearly traceable to ganja-smoking and nothing else, neverthless I think that ganja materially aided, if it did not actually set up, the mental disease.

Subsequent to my return he became daily quieter and showed signs of mental improvement, and on the 20th April 1894 was sufficiently recovered to be released by order of the official visitors of the Asylum.

If he returns to his ganja-smoking propensities it is not unlikely that we shall have him back in the Asylum before long.

4. *Akbar Khan.*—From the statement which accompanied him on admission to the Lunatic Asylum, it would appear that he has been a wandering lunatic for six or seven months. The supposed cause is "ganja-smoking, &c." His Asylum history shows that he was noisy, abusive, and incoherent, alos at times destructive.

He himself ascribed his insanity to an illness for which he was blistered behind the ear. Says he took ganja, also "daru."

Told me that he had used ganja and majum and also alcohol, brandy, &c.

He was very incoherent and could not be kept to the point. He is always abusive and uses indecent language. Is quarrelsome and at times violent and given to assaulting the others.

The magisterial special enquiry gives the evidence of two of Akbar Khan's acquaintances, who testify that he was a confirmed ganja-smoker and spent all his money in intoxicants, but both say that he also used to drink "tari" pretty considerably. One witness states positively that the ganja caused his insanity, and the other states that his madness was subsequent to an attack of "fever" (acute mania?).

In this case the man is a confirmed lunatic, but whether the insanity in the first instance was induced by excess either of ganja or alcohol I think it would be difficult, if not impossible, to positively determine.

Little is known of his family history, and although one of his acquaintances says that none of Akbar Khan's relatives were insane, I should like more convincing evidence of this before I could altogether exclude heredity as a factor in the causation of his insanity.

5. *Rudraya.*—His papers say that he was a wandering lunatic and was found sitting by the police on the banks of the Andhari River, was very violent, and required three men to restrain him, &c. Was violent whilst in Jail, and then lapsed into silence.

Subsequent to his admission to the Asylum he was at first depressed, and then very violent with impulses to strike every other person near him, and then he became depressed.

He would not talk to the members of the Ganja Commission.

The special magisterial enquiry states that no relatives can be found. He told me that he had never taken any narcotic or stimulant (alcohol, ganja, or tobacco). He was disinclined to answer any questions, or to pay much attention to what was said to him.

Alleged cause of insanity ganja, but no definite or trustworthy evidence on this point.

N.B.—The Asylum clerk says that he recollects that when Rudraya was admitted to the Asylum he admitted to having taken ganja, but there is nothing recorded of any admission of this nature. He also says that the police who brought him said that Rudraya had been some days on the river bank and that the malguzar and people of the vicinity, considering him to be a sadhu, had brought him from time to time milk and ganja. This may account for his violence at Chanda and when first admitted into the Asylum.

In my opinion all that we are justified in conjecturing from the history and present mental state of Rudraya is that he is a weak-minded creature, given to wandering habits, suffering from melancholia, with occasional periods of excitement and with a craving at these times for stimulant narcotics as ganja, and further that the gratification of this craving probably aggravates the mental excitement.

6. *Kalekhan.*—Supposed duration of disease, 9 months. The medical certificate says :—" The patient is a ganja-smoker." He had been in the 1st Regiment of Infantry, Hyderabad Contingent. Had been discharged for insanity, was found wandering at Anjangaon, and when in the regiment had a habit of straying away towards the hills. He is under the impression that he is a great man, and that others should pay him every respect. Remains motionless for half an hour at a time, and then begins to laugh, &c. &c. The Asylum history shows nothing special beyond that he was excited in July 1892, again in August 1892, and again in January 1893. Depressed since May 1893.

Nothing coherent could be got out of him by the members of the Ganja Commission.

The special magisterial enquiry notes the evidence of one Mahomed Khan, who says he is a distant relative of Kalekhan (though Kalekhan denies this) ; says he was steady in early life, but after employment showed vicious tendencies. It was suspected that he drank liquor privately, but not in public. He was attached to a prostitute and quarrelled with her, whereupon she left him and he became insane. It is said that something was given him to smoke with tobacco, and from this he became insane. None of his relatives are insane.

I questioned him at some length as to his past history, habits, &c., but beyond the fact that the above Mahomed Khan was no relation of his, he refused to reply to any question. Is generally depressed and silent. Knee-jerks present.

In my mind this is another instance of a man of weak intellect with wandering tendencies. I can find no positive evidence to support the ganja hypothesis. He was suspected of secret drinking, and there is a history of disappointment in love. Weighing these three possible causes of his insanity, I cannot find any grounds for assuming that one cause was more active than either of the other two in causing the insanity.

7. *Lachman, Gond.*—This man was discharged from the Asylum previous to my assuming charge of it, and his whereabouts are unknown. As I did not see him or examine into his mental condition, I prefer not to offer any criticism on the supposed cause of his insanity being ganja.

In conclusion, I find that in many of the cases there is a history of ganja-somking combined with alcoholism, and in two cases a further complication of disappointment in connection with some love intrigue. How much, if any, of the insanity was produced by the

ganja I cannot say. Only in the case of Rudraya does it appear to me that ganja was probably the main cause of the insanity.

I regret the delay in submitting the report on these cases, but I did not thoroughly understand that a report was called from me after having had the cases such a short time under observation.

Extract from the evidence of Surgeon-Lieutenant-Colonel McKay (Superintendent, Nagpur Asylum, 1892).

(1) *Atmaram.*—This man states that he now and then smoked ganja. He has apparently been insane for 7 years. There is no history of violence or very unusual excitement, and I very much doubt if ganja-smoking has had anything to do with his present condition. It is very doubtful if he even ever smoked ganja, for it is utterly impossible to believe what he says.

He appears to have been sane until he went to Jail at the age of 20 and became insane in the Jail and has remained so ever since. Supposed cause "perhaps ganja." There is no history of the man ever having smoked ganja and his symptoms would not lead me to suspect it.

(2) *Tajodin.*—There was no history sent with this man, and very little that is reliable can be obtained from him. The Magistrate says that the cause of insanity was unknown. The medical officer of the dispensary, Kamtpee, says that he is supposed to be a great ganja-smoker. The man has occasional fits of excitement followed by depression, and he has lately become very suspicious, shies at everything he passes. Here again the ganja-smoking is doubtful. He has apparently been known to have been insane for 5 years and during that time there is his history of violence. Here again the symptoms would not lead me to suspect ganja. There is not that sudden violent excitement which one associates with the use of the drug.

(3) *Itwargir.*—No history was sent with this man. He is a beggar. He was admitted into the Asylum violent, noisy, and filthy, abusive and incoherent. Beyond the man's own statement it is not certain that he ever smoked the drug. He admits having been a ganja-smoker and perhaps this case might be put down to the drug, but it is not a characteristic case.

(4) *Akbar Khan.*—This man was also a beggar; used to sit at a certain spot in the city and had been doing so for years. He is supposed to be a ganja-smoker, but there is no evidence beyond his own word that he ever smoked the drug. He is a great talker, very abusive, but is never violent. This man has been a lunatic for years and will admit anything, but I cannot include this case.

(5) *Rudraya.*—This man is also a beggar and has no friends or relatives. The supposed cause is excessive ganja-smoking. He certainly when admitted showed signs of violent mania, which may have been caused by smoking-ganja, but there is little known about him before he was found sitting on the banks of the river. This man has apparently been insane for years. I do not think his symptoms would lead me to say that ganja was the cause.

(6) *Kalekhan.*—There is here a history of ganja-smoking; but can we put down the ganja as the predisposing or the exciting cause? He was very depressed with occasional fits of excitement the first few days of admission and these fits of excitement continue but with longer intervals.

He says he has smoked ganja, but the symptoms do not lead me to suspect that ganja has had anything do with the insanity.

LUNATIC ASYLUM, MADRAS.

(SUPERINTENDENT, DR. THORNHILL.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
1. Kamal Sahib; Musalman; Cultivator; Cuddapah; 40; 32·519.	Ganja.	Mania ...	Bad	The papers show that nothing was known of this man's history or of the cause of his insanity. His incoherence, excitability, and sleeplessness are the principal signs of his insanity. Admitted, 10th February 1892.	On admission he was "incoherent and noisy. Repeats questions put to him. Bad health, spongy gums." He died of pneumonia on January 18th, 1893. There are no *post-mortem* notes except that there was consolidation of the lower lobe of the left lung. In the Asylum there was no improvement in mental condition, while his physical health became daily worse.
2. Mustan Saheb; Musalman; Cultivator; Anantapur; 34; 32 520.	Ganja.	Mania ...	Fair ...	The papers show this man to have been five years insane. The cause is "unknown." The man was under the delusion that he was Emperor of Delhi, that he had unlimited wives, and that the whole world belonged to him. He was sleepless also and refused food. Admttted, 10th February 1892.	On admission this man was "voluble and rather noisy, but on the whole fairly rational." On 21st July he is stated to have "much improved," but still suffers from delusions. The insanity is ascribed to ganja, because the man admits that he used that drug. He informed us that he had smoked ganja for twelve years, that he never used datura seeds, but that he frequently smoked the dried leaves of the datura which produced a pleasant intoxication and was more easily obtainable than ganja. He said he thought the seeds much stronger than the dried leaves.
3. Tanikachellum; Hindu; occupation unknown; Madras; 36; 32·525.	Ganja.	Mania ...	Fair ...	The papers show that the cause of this man's insanity is "unknown," that he "speaks irrationally and is very dirty in his habits and sometimes noisy." "His chin is swollen where he knocked it against the wall a few days ago." The Presidency Magistrate's inquiry does not attempt to reach the cause of insanity. Admitted, 18th February 1892.	On admission this man was found to have a fractured jaw, which would have to be cured before his mental condition was inquired into. On 21st July he was reported to be "quite rational and much improved and nearly fit to go." He was released on 22nd March 1893. The Asylum case book contains no reference to the cause of insanity, nor is there anything to show how the cause was determined. The Deputy Superintendent (Mr. Judge) explains that the cause is entered in the appropriate column of the annual register at any time when it is discovered by the Asylum authorities, for the Government presses to have every effort made to ascertain the cause in all cases.
4. Sheikh Hussain; Musalman; Peon; Anantapur; 41; 31·179.	Bhang.	Mania ...	Good...	The papers show that this man had borne a good character to the end of 1890. "At 1 o'clock of the 1st December 1890 the prisoner, in a state of intoxication, voluntarily caused by eating ganja, beat to death brutally with a heavy stick on the head an old man." He was sentenced to transportation for life, which Government reduced to 10 years' imprisonment. The High Court found on 16th July 1891 that "the evidence of the District Surgeon shows clearly that the abnormal state of mind of the prisoner was merely the temporary effect of the intoxicant which he had taken and could not pro-	On admission Dr. Dobie entered the type as mania, adding "reported to be bhang, *i.e.*, ganja." The man was "quite melancholy, says he has been a year in Jail. Says he is accustomed to ganja and asks for it." He has not improved in the Asylum. He still remains "violent at times." Before us he admits taking ganja.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Tpye of Insanity (Statement VI).	State of health on admission.	Facts ascertatned from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
4. Sheikh Hussain—*contd.*	Bhang.	Mania ...	Good...	perly be traced to any mental disease." The medical case, however, shows (1st February 1892) that "the prisoner has been in Jail for a year. Ordinarily he conducts himself well, endeavours to do his work, and is remarkably taciturn. But from time to time (on six occasions) he exihibited signs of mental alienation chiefly by reporting imaginary circumstances and by sleeplessness. On such occasions he was placed under observation and recovered in a few days. The recurrence, however, of these attacks has recently become more frequent and the unsoundness of his mind more pronounced. His last attack has been more serious than any preceding and has lasted 13 days. He has now become noisy and filthy in his habits." Admitted, 29th March 1892.	
5. Moorthy Veeraswami; Hindu; Cooly; Madras; 45; 32·535.	Ganja.	Mania ...	Bad ...	The papers show that the cause of insanity is "unknown, probably ganja smoking." He is "noisy, speaks irrationally, sometimes knocks his head on the ground and inclined to suicide." Admitted, 31st March 1892. Discharged, 23rd June 1892.	The Asylum casebook shows that on admission "he is half starved, in very bad health, scorbutic. Holds his hands above his head, prostrates himself, clutches his throat, and talks incoherently. Habits last night most filthy; smeared himself with excreta." On 11th May he was "quiet and rational;" on 17th June "perfectly sane." He was discharged as cured. A pencil entry in the register says "cause, probably starvation."
6. Madula Sooryanarain; Hindu; Sepoy; Godavari; 25; 32·536.	Ganja.	Mania ...	Good...	This man was a sepoy and discharged for insanity. The cause was "not known, but said to be addicted to *ganja* smoking." He was "very noisy and troublesome seldom answers questions rationally, very abusive in his language, goes about naked in his cell." Admitted, 1st April 1892. Discharged, 21st July 1893.	The Asylum history shown to us by the Deputy Superintendent appears to have been that of another lunatic who died of cholera. This man was (Dr. Dobie informs us) discharged cured on 21st July 1893.
7. Pappa; Musalman; Gymnast; Godavari; 26; 31·181.	Ganja.	Mania ...	Good...	This man "is reported to smoke *ganja* and eat *bhang*." His mother stated that "he is always in a state of confusion and out of sorts during new moon, and that periodically he refused food and would not eat till he saw blood flow out from an animal; and this desire had to be satisfied by himself, when he killed a sheep or fowl, and after seeing the blood flow out, he felt relieved and able to go about his usual occupations." He was under observation of the Civil Surgeon at the Sub-Jail of Coconada from 4th December 1891. He "behaved rationally" up to22nd idem, when he murdered the head-constable of the guard in a most brutal manner without provocation. The cause of his insanity is "not known." Admitted, 7th April 1892.	This man has all along been regarded as dangerous. The Superintendent remarks: "If he were more mad he would be more easily controlled." It has also been recorded that he is quite unsafe and should not be trusted free for five minutes with power to harm. He has not changed in mental condition. He is lightly fettered. He denies having used ganja or bhang. He talks rationally. His mother's statement points to long continued lunacy. But it is denied that any of his relatives were mad; and there is no knowledge of any cause of insanity.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers, and from inquiry from Superintendent.
8. Ramaswami; Hindu; Sepoy; Vizagapatam; 32; 32·529.	Ganja	Dementia	Good	The papers show the cause of insanity as, "he has been in the habit of smoking *ganja*." "His general appearance is that of a man who is slightly demented, although he answers questions and speaks rationally when addressed. The Hospital Assistants say that he was noisy the first night he was in the penitentiary. The orderlies say that he wanted to commit sodomy with them. And as the police report his having behaved in an insane manner outside he should be sent to the Lunatic Asylum for treatment and further observation before going back to his regiment, and having arms placed in his hands." Admitted, 22nd April 1892.	This man when admitted "laughs foolishly, but answers rationally." On June 20th he was "rational, quiet, and well-behaved." And on 23rd idem he was handed over to his friends "improved." There is no mention of ganja in the case book.
9. Nabi Saheb; Musalman; Cooly; Bellary, 35; 33 2.	Ganja	Mania ...	Fair ...	The papers show the cause of insanity as "said to be from sorrow." "He commenced to lose muscular powers. His legs and arms were tremulous. Lips trembled during speech and the pronunication was imperfect. His memory failed. He was on several occasions found moving about corners of the Jail cell incessantly talking to himself and smiling." Admitted, 8th May 1892.	On admission he "is rather wandering and incoherent in his speech, but fairly rational." He continues incoherent but quiet. He is said to have admitted the use of *ganja*, but to us he denies it altogether.
10. Hari Mohanti; Hindu; Cultivator and Clerk, Jeypore, 35; 31·207.	Ganja	Melancholia.	Fair ...	The papers show that this man was charged with murder and acquitted on the ground of insanity. On 31st December 1878 he said: "At one time I took ganja;" but on 5th March 1879 he said: "Paroxysms of insanity frequently come over me. I have taken opium. I was allowed opium in the District Jail in very small doses as being unable to do without it." The Judge describes the prisoner as "an emaciated creature suffering from the effects of excessive use both of mercury and opium." The evidence showed that he took mercury for venereal disease and also took opium, but not hemp drugs. Admitted, 10th August 1892.	On admission the man was entered as suffering from "toxic insanity." The type was finally entered as "melancholia." He has not altered in mental condition. He is said to have admitted in the Asylum that he used *ganja*; but before us he denies this altogether.
11. Kunji Kalappen; Hindu; Proprietor; Malabar; 34; 33·60.	Ganja	Not insane	Good ...	The papers show, that this man was handed over to the authorities as insane by his friend, Mr. P. C. Rama, "He stares in a peculiar manner, laughs without cause. Won't bathe. Wandered away in the middle of the night. Repeats shastras." The cause of insanity is shown as "alcohol and ganja." Admitted, 9th September 1892. Released, 3rd October 1892.	Dr. Dobie (the Superintendent) records that this man never showed any signs of insanity. He was therefore released on 3rd October 1892. Inquiry showed that "he used to take spirits some time ago, but never ganja. His servant says that four years ago the patient used to drink brandy and wiskey about 2 drams (6 oz.) a day, and that he never took ganja. Says Mr. Rama is *not* his friend." "Has shown no signs of insanity to any of the Asylum officials who have to do with him."

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
12. Mahadi Saheb; Musalman; Bazarman; Bellary; 35; 31·251.	Bhang	Mania ...	Fair ...	This man was charged with housebreaking and acquitted on the ground of insanity. Cause "probably bhang." "Four previous attacks reported by the police." "At frequently-recurring intervals the patient becomes excited, suffers from hallucination and insomnia. He is noisy, irrational, violent, very filthy in his habits and mischievous. Destroys his clothing and has no sense of shame." Admitted, 26th September 1892.	On admission: "Health fair, scorbutic. Answers rationally, quiet, well behaved. Says he has never taken bhang, spirits, toddy, or opium; only snuff." 13th January 1893: "Quite rational, sane at present. 3rd March 1893: "Has become maniacal again, tearing his clothes and being filthy." His condition is not improved, though he has periods of practical sanity. To us he asserts in detail that he never took liquor, drugs, or tobacco, but only snuff.
13. Coopen; Hindu; Beggar Madras; 35; 33·70.	Ganja	Mania ...	Fair ...	The papers show the cause as "physical from the effects of ganja." Speaks in a furious tone when addressed, and displays a condition of great irritation and excitement, which increases the more he talks. When not speaking he has a sullen and brooding expression and mutters to himself at times. His cousin's wife said: "He is in the habit of getting periodical madness every new moon and is dangerous." Admitted, 29th September 1892.	On September 30th 1892 "Answers rationally, talks freely. Says he has been addicted to ganja and had none for ten days, in consequence of which deprivation his head went, and he is a little mad now; clean, well behaved, quiet." October 18th: "Talkative, craves for ganja." 24th March 1893: "Wants ganja badly: talks irrelevant nonsense." Before the members of the Commission he admits the use of ganja from childhood, and says he often used dried datura leaves, but never datura seed.
14. Tadiya; Hindu; Trader; Vizagapatam; 45; 31·256.	Ganja.	Mania ...	Very bad	The papers show the cause of insanity as "unknown," and makes no mention of drugs. The man was charged with stealing a horse and acquitted on the ground of insanity. The Hospital Assistant at Belgaum, under whose observation he was kept, stated that his habits were filthy, that he was "talking to himself always, general dislike to others without any cause, and laughing to himself and catching imaginary things at times," and sleepless. The Civil Surgeon certifies that "he is constantly shouting and singing, is very abusive. When asked why he had been sent to Jail did not reply, but became very abusive and violent, and lifted the Jail warder who was standing alongside him off his legs." Admitted, 27th October 1892.	On admission: "health very bad, scorbutic; very incoherent in his answers and inclined to weep for nothing; speaks of arrack and ganja with manifest delight, does not take opium in any form. Drinks toddy and refers to this with joy. Says he is a great drinker." Has since been liable to fits of excitement, and is still in the same mental condition. His physical health is now good. He was fairly rational before us and stated that he took ganja and liquor.
15. Dona Papada; Hindu; occupation not known; Vizagapatam; 25; 31·258.	Ganja.	Mania ...	Good...	This man's insanity is "probably due to excessive use of ganja (Indian hemp)." He was charged with grievous hurt, having broken a little girl's skull without provocation. The case was adjourned on the ground of his insanity. He "talks and laughs to himself and is constantly putting his tongue out of his mouth." He had several fits of violence. Admitted 1st December 1892. Recovered 15th March 1893.	On admission; "Answers questions rationally, states that he remembers having struck somebody and that she did not die; clean, quiet, and works." By the 15th of March he was held to have completely recovered, and was sent out to stand his trial.

Hemp Drug cases admitted in 1892—concld.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent.
16. Mahomed Osman; Musalman; Tradesman; Penang; 32; 33·84.	Ganja.	Mania ...	Fair ...	This man was brought from the Rangoon Asylum under orders of the Government of India. He had been confined from November 1890. His insanity was classed as "Toxic" and ascribed to "ganja smoking." He had "an excited manner, laughing and talking," and sometimes went about naked. Admitted, 5th December 1892.	On admission: "Answers rationally. Fair health. Quiet and does not now take off his clothes." On 24th March 1893: Becomes excited at times. Not quarrelsome, but if roused wants to fight. Diagnosis—mania. Before us he denies ever having used ganja or other drugs.
17. Abdul Kadir; Musalman; Ex-Sepoy; Vellore; 33; 33·89.	Ganja.	Mania ...	Fair ...	The papers show that this man had been a sepoy, but "dismissed five years ago, as he became insane." "This is the second attack; was in the Lunatic Asylum, Madras, in 1891." The supposed cause is: "Was addicted to ganja smoking while he was a sepoy." "Abdul Karim, the father of the lunatic Abdul Kadir, was insane." He is described as irritable and quarrelsome, sleepless, irrational, and subject to delusions. Admitted, 28th December 1892. Discharged, 2nd September 1893.	On admission this man complained of numbness in the palms of his hands and soles of his feet, talked correctly and with reasonableness. Had a good recollection of his past stations where he served. In March 1893 he was "clean and quiet and rational, and appears sane." He was discharged as cured in September 1893. The positive statement of his father's insanity should not be overlooked.

NOTES.—(1) The total number of admissions from all cases in 1892 was—

Criminal	Males	...	63
	Females	...	13
Non-criminal	Males	...	94
	Females	...	46
	TOTAL	...	216

Of these, the above seventeen cases are ascribed in Statement VII to "hemp drugs;" but none of them is entered in Statement VI under "Toxic insanity."

(2) Dr. Thornhill has only just joined his appointment as Superintendent. The Deputy Superintendent (Mr. Judge) states that Dr. Dobie, who was Superintendent in 1892, held that Statement VI must show the cases under the type to which they belonged, and that there is nothing to mark off any of these cases as of toxic type, whatever the cause of insanity may have been.

Dated 23rd September 1893.

Report by Surgeon-Major J. W Evans, Acting Superintendent, Government Lunatic Asylum, Madras, on the Hemp Drugs cases of 1892 (No. 343, dated 8th May 1894).

I have the honour, in reply to your letter No. 264, dated 21st January 1894, to forward herewith the further information obtained and the papers sent by the various Magistrates.

2. Out of 17 cases replies have been received in 12 up to date.

3. Of these 12, as regards cases Nos. 5, 8, 9, 10, 14, and 15 no further information could be obtained as relatives could not be found or aquaintances who could speak to the men's habits. Cases 3, 11, 12, and 13 seem to have been men who used ganja. Cases 6 and 7 appear to have been entered as caused by ganja without much enquiry, and evidence collected points strongly against their insanity having been caused by ganja.

4. I regret the delay, but one of the cases was only received yesterday, and in all the others there has been much delay.

Report of the further inquiry in the Madras Asylum cases of 1892.

1. *Kamal Sahib.*—This man cannot be traced. The Gooty Deputy Magistrate, who sent him to the Asylum, cannot say where he came from.

2. *Mustan Saheb.*—No further information available.

3. *Tanikachellum.*—This man's brother, a clerk in the High Court at Madras, states he was not addicted to ganja, but may have smoked it with friends. The police report from other relatives corroborates the above statement.

[*Note.*—The papers being perused show that the brothers of this lunatic were examined by Sub-Inspector Ryan, who reports that they stated that "there has never been anything like insanity in the family before. That Tanikachellum is a very steady man, and that they never knew him to take ganja. He was not even to their knowledge in the habit of taking liquors or smoking. They say that he became very morose owing to his not getting an appointment; and to this preying on his mind they attribute his becoming insane. They can attribute no other cause. He has been living with them since his release on 20th June 1893, and has been all right since his return. He is not given to the use of ganja even now **. They do not think that ganja had anything to do with his insanity." The elder brother's statement, referred to by the Superintendent, was separately recorded. He said: "My younger brother went with friends to Trivellore, and returned out of his mind. He was not addicted to ganja or drink. He may have indulged with his friends and exposed himself to the sun and weather, and hence his condition **. When he went to Trivellore he had a large quantity of hair on his head and face as he had made a vow. While in Trivellore he had himself cleanly shaved, and perhaps exposed himself to the sun and led a dissipated life. As far as I know he was not a ganja-smoker."]

4. *Sheikh Hussain.*—

The Acting Head Assistant Magistrate, Penukonda (Anantapur), reports.

I have examined the wife of this individual as well as her brother as to his previous history, and the following persons as to the question whether he was addicted to smoking ganja:—

1. Allagappa Modaliar, with whom the lunatic was for a year as Minor Irrigation Lascar.
2. (*a*) Peddabi, present Duffadar of the Head Assistant Collector's office.

   (*b*) Peru Saib, attender: who were in the same office when the lunatic was taluk peon and afterwards the Head Assistant Collector's peon.

The result of my enquiry is as follows :—

Previous history of the case (general and family).—Sheikh Hussain, Musalman, of the Sheikh sect, lived with a brother at Bangalore from his twelfth year. Enlisted in 1879 as a sepoy, served in Afghanistan, obtained a medal for that service, and took his discharge (voluntarily) in 1883. By the order of discharge he was then about 24 years of age. Subsequently he married the sister of a Jagirdar, who bore him four children, one of whom has died by an accident; the rest are alive and well. I have seen two of them, and they seem to be in perfect health. Sheikh Hussain's brother, father, and mother are all dead, so that unfortunately there is no possibility of ascertaining his early habits. Nor is it practicable to find out what sort of habits he formed during his three or four years' service as a sepoy.

According to his wife and her brother, Sheikh Hussain was quiet and well-behaved; not known to be addicted to smoking ganja; at times drank toddy, which, however, did not make him noisy and quarrelsome; he was never known to go out of his mind, or be strange in his manner until about a month before he went to Anantapur (that is, 1890, when he killed the man). Just before going to Anantapur his conduct became queer; he gave away his things to strangers (*goshais*); did not sleep well; and finally went off to Anantapur (with the Head Assistant Collector) without change of clothes, &c.

The duffadar and the acting attender of this office both speak to Sheikh Hussain being addicted to smoking ganja. The former states that he only knew of this habit from the time Sheikh Hussain became peon of this office, but fancied that he had taken it previously.

The same witness says that for a month or so before the journey to Anantapur, Sheikh Hussain took ganja very heavily indeed, and the attender's evidence, while not going quite so far, shows that at Anantapur Sheikh Hussain seemed to live on ganja and raw Bengal gram rather than on proper meals. The acting attender also adds that Sheikh Hussain had contracted the habit of taking ganja, a year or so before he became peon, from *goshais* (the people to whom he gave away things according to his wife and the duffadar) and from a dhobie of Penukonda. The duffadar remembers that four months or so before Sheikh Hussain went to Anantapur, he (Sheikh Hussain) in a fit of (perhaps) mental alienation gave away vessels, etc., to *goshais*. The Irrigation Overseer (now pensioned), with whom Sheikh Hussain worked for about a year as lascar, states that he did not observe Sheikh Hussain taking ganja at any time while they were together. Sheikh Hussain seems to have been with the Overseer most of the day (up to 6 or 7 P.M.), and to have gone away to his own lodgings in the evening.

5. *Moorthy Veeraswami.*—No information obtainable.

6. *Madula Sooryanarain.*—No evidence of ganja beyond the statement of the late Civil Surgeon, Coconada. The man is now well and denies ever having used ganja. He and his relatives attribute the insanity to Beri-Beri.

[*Note.*—The papers show that no one can explain how Dr. Patch (late Civil Surgeon Coconada) came to enter the words "said to be addicted to ganja smoking." The evidence recorded by the Magistrate is clear that the man never took ganja. The Acting Civil Surgeon also says: "The man appeared before me; and when examined denied smoking ganja or eating opium. He attributed the lunacy he suffered from to the serious illness (evidently Beri-Beri from his description) in Burma. His cousin, who accompanied him, confirmed his statement."]

7. *Pappa.*—Godaveri Magistrate reports that there is no evidence of ganja beyond the cause of insanity entered by the Civil Surgeon, Coconada, who stated that he smoked ganja and drank bhang. The Jail warders, however, do not know on what authority the statement was made.

[*Note.*—The following letter (No. 124, dated Coconada, 29th March 1894) from the Deputy Magistrate, to the District Magistrate, Godaveri, gives full details of this case.]

As directed in your reference No. 100, Magisterial, dated 9th February 1894, I have held an enquiry into the case of the lunatic Pappa, and arrived at the conclusion that his insanity has no connection whatever with hemp drugs. The important living relatives of the lunatic have been examined by me in the presence of Surgeon-Captain W. C. Wickers, the present Civil Surgeon of Coconada, and not one of them says he ever used ganja; the warders of the Jail in which he was detained, as also a constable who was on duty at the Jail, were examined, and they too deny that Pappa has ever even asked for ganja; of course the use of the same during his detention in the Jail was out of the question as being against the rules; the depositions given by these witnesses, nine in number, are enclosed.

It seems to me that the only ground for classing his insanity as "toxic" is the entry by Dr. Patch of the following sentence against item No. 8 in Appendix II relating to Pappa's case :—

"He is reported to smoke ganja and eat bhang."

It is not clear how and wherefrom Dr. Patch got this information; none of the persons examined by me and the Civil Surgeon, who were mostly the same as those whom Dr. Patch examined, appears to have given Dr. Patch this information; a copy of the said Appendix II is enclosed. The notes made by Dr. Patch in the visiting book kept at the Sub-Jail do not also show that Dr. Patch had any reason to suspect that the lunatic Pappa consumed any hemp drug; a copy of these notes is also enclosed.

The past family history of the lunatic has been ascertained, and nobody either on his father's side or on his mother's side ever used ganja or exhibited insanity ever so little.

His father was a peon in the Pittapur Deputy Tahsildar's office for nearly forty years and died of natural causes at the good old age of seventy years; his paternal grandfather was a peon in the Tanuku Taluq office and died at a good old age. His mother is alive still and is hale and healthy, though she is now sixty years old. His maternal grand father was a peon in the Coconada Deputy Tahsildar's office and died at an old age. Three of his sisters are now alive, and they have never exhibited any symptoms of insanity. He had no brothers, but he lost a sister about ten years ago; she fell a victim to some disease consequent on child-birth. Thus there has been no insanity in his family, and his insanity is unquestionably not a hereditary one.

With regard to his personal history, the deposition given by his mother contains a lot of information. It would appear therefrom that up to his twenty-third year or so he was quite sane, and that his insanity first appeared three years after his marriage. The first symptom observed was to talk incoherently, to complain of biliousness, to refuse to eat, and to run out into the fields. For two years after the appearance of this symptom, he was out of sorts, complaining of his system being heated and eating and drinking all those things which are calculated to cool his system. He was a gymnast, and used to eat mutton and other nutritious food in large quantities. On one occasion he ate a seer of chillies and quaffed a pint of gingelly oil, and jumped into the well in his house; this appears to be the first time when he behaved in a manner dangerous to himself. It would appear that his mother and others fettered him for about six months after this event, and then sent him on to Rajahmundry for treatment, where, however, the Doctor who kept him under observation found that he was not insane and procured his discharge. This was in 1890. It may be noted that by the time he got out of the Jail he was not as fat as before. In about a year afterwards, he again grew as fat as ever and became mad again, when he was handed over to the Deputy Tahsildar of Pittapur. What took place afterwards is to be found in the letter No. 5,* dated 9th January 1892, of my predecessor's, of which a copy is enclosed.

* This letter gives an interesting account of an atrocious murder of a Head Constable by this lunatic while in the Sub-Jail.

The man's insanity is certainly not toxic; it would seem to be due to over-eating and over-bloodedness in the system, which always made him court fight and behave as

though he was the strongest man in the world and had no equal to him in strength on the face of the earth; he was the winner in two to three very famous wrestling matches arranged by the late Raja of Pittapur, whose *samstanum wrestler* he was for some years.

It is a pity that Dr. Patch did not say where from he got his information about his being a ganja smoker and bhang eater, but, from what I have been able to gather in regard to this man, it seems to me that Dr. Patch was misinformed and misled.]

8. *Ramaswami.*—No information obtainable.

9. *Nabi Saheb.*—No additional information obtained.

10. *Hari Mohanti.*—No additional information obtained.

11. *Kunji Kalappen.*—The Tahsildar Magistrate of Charikal reports that Kunji Kalappen indulged largely in strong liquors, and in the early part of 1892 took ganja freely.

[*Note.*—The Tahsildar's report is as follows: "Kunji Kalappen is said to have been indulging too much in strong liquors, and he was also very licentious. In the early part of 1892 a certain Embrandiri Brahman went to his house and initiated him in the secret of some mantroms. He also advised him to use ganja, which would, he said, facilitate concentration of thought in practising the mantrom. Kunji Kalappen took up his advice and indulged freely in the use of ganja, which, together with the other two vices alluded to, rendered him insane **. The Civil Surgeon of Cannanore informs me that the above vices are sufficient to cause insanity."]

12. *Mahadil Saheb.*—The Assistant Surgeon, Bellary, states that he (Mahadil Saheb) had a craving for ganja. The younger brother also apparently states that the patient used ganja, although the statement is not clearly given as regards him, but more clearly as regards their father, who was also addicted to ganja. The Magistrate is, however, of opinion that the man was not addicted to ganja but liquor.

[*Note.*—The statement of the younger brother, referred to by the Superintendent of the Asylum, is thus recorded: "Their father was also* addicted to ganja-smoking for several years **. Mahadil Saheb never indulged in ganja smoking any time." The Magistrate's report contains an accurate summary of the evidence. It is as follows:—

* This word "also" is erased by a line run through it; but it has apparently led to the Superintendent's remark.

In reply to your proceedings No. 224, dated 16th February 1894, I beg to report as follows, after consultation with the District Surgeon, regarding the past personal and family history of the lunatic Mahadil Saheb of Canel Bazar.

2. On the 25th of February 1894 three of the relatives of the lunatic, *viz.*, 1, Jarrudin, brother of Mahadil Saheb; 2, Sherifma, mother; 3, Katuma, his wife, were examined.

3. It would appear from their statements that the lunatic's father was addicted to the use of ganja, and that he lived till he was 90 years old. The lunatic's mother is now about 80 years old, and says that neither her parents nor the parents of her husband were insane at any time during their lives.

Mahadil's father, though used to ganja-smoking, was never insane.

It would appear that the lunatic Mahadil Saheb had three sisters and three brothers. Of the sisters, one, that died eight years ago, aged about 45, had suffered from symptoms of either hysteria or insanity, which came on after her delivery. This lasted about three months, after which she was all right. Neither this woman nor his other sisters and brothers were ganja smokers; none of them were confirmed lunatics.

4. It would appear from the copies of the certificates which accompanied him to the Lunatic Asylum that the probable cause of his lunacy was stated to be the use of bhang. But from the evidence collected it would appear that Mahadil Saheb was not addicted to

the use of ganja or bhang. It is stated by the lunatic's wife that he was occasionally using liquor.

5. On the 27th February 1894 Ramatanie Pillay, Abkari Contractor, who knew the lunatic for the last 15 years, was examined. He states that in his opinion the cause of Mahadil's lunacy is his misfortune and contracted circumstances rather than to ganja smoking, as he was not addicted to that habit to the best of his knowledge and belief.

6. Gopala Tunei Nayudu, Head Clerk of the District Jail, speaks to an admission made by the lunatic when he was in Jail to the effect that he used ganja freely, and says that he learnt from his neighbours at Canel Bazar that he was addicted to that drug. His evidence is hearsay, and the lunatic's admission cannot be relied upon as it is supposed to have been made when he was an insane in the Jail.

7. Five more persons who personally knew the lunatic were examined by me at Canel Bazar, whose evidence goes for the most part in corroboration of that recorded from the relatives of the lunatic. It seems to be clear that Mahadil Saheb was not addicted to ganja smoking and that the cause of his insanity has not been clearly established.]

13. *Coopen.*—His nephew says he lived by begging, and about two or three years ago he began smoking ganja and eating majum. He also stated that "he also used to drink toddy and arrack." The police report corroborates the above, but his brother states it was some four or five years ago that he took to ganja.

[*Note.*—The brother's statement is as follows: "It is only two or three years ago Coopen became mad. He got into the habit of smoking-ganja and eating majum. He also used to drink toddy and arrack. His first symptoms of madness were fits **. When he got these fits he used to fall down, and he used to foam at the mouth. The fits used to last only for a very short time. Afterwards he used to become violent. In this state he would continue for four or five days and then he would recover; and the same sort of fits and madness used to repeat itself on almost every new-moon day."]

14. *Tadiya.*—No additional information obtained. Supposed to be a man down from the Central Provinces.

15. *Dona Papada.*—No additional information obtained.

16. & 17.—Reply not received.

(Sd.) J. W, EVANS, *Surgeon-Major,*
Acting Superintendent,
Government Lunatic Asylum.

OOTACAMUND;
October 6th, 1893.

DEAR DOCTOR WARDEN,

I think it better to wait till I reach Madras (October 10th) before sending in remarks on your list of hemp drugs cases in the Madras Lunatic Asylum.

To begin with, I must assure myself that the cause * has been entered in my own handwriting. The statements of medical officers, medical subordinates, and magistrates as to cause are usually untrustworthy, and are generally second-hand, from relations, who will say, for example, that the new moon is a cause—I believe the Western belief is the full moon. My own experience in the Asylum was that I had to discard as much as possible the cause assigned in the admission papers, and to try and find out for myself, and to put down the cause only when I felt I had reasonable cause for so doing.

* Of insanity.

Even commissioned medical officers, not to mention apothecaries and medical subordinates, who send many cases, know little of insanity, and seldom realize how often mere privation is a cause.

As to Toxic insanity, my view, founded on a good deal of practical experience at home and in Madras, is that you might just as well talk of Financial or of Hungry insanity. A man or woman has mania, melancholia (a form of mania), or dementia, the result of the puerperal state, pecuniary losses, fright, alcohol, ganja, epilepsy, privation, etc. I don't mean that chronic dementia is the direct result; mania or melancholia as a rule intervening between the cause and the demand state. I presume that the idea is that toxic insanity has features peculiar to itself, just as puerperal mania has, in perverted affection, homicidal or suicidal tendency and obscenity. But, after all, even this latter (puerperal mania) is not sufficiently different from ordinary mania to deserve a separate place.

It may be somewhat curable; so are lots of cases of acute mania. It may recur with the puerperal state; so do lots of cases of mania on recurrence of the cause.

As for the symptoms, perverted affection, suicidal and homicidal tendencies are common enough in cases of mania; and the obscenity, common enough in mania in both sexes, is only remarkable as often occurring in the case of refined or religious women, who then use language one can hardly believe they have ever heard.

Yours sincerely,

S. L. DOBIE.

6. Madula Sooryanarain did not die of cholera, but was discharged cured, July 21st, 1893.

S. L. DOBIE.

Dated Camp, Madras, 20th October 1893.

From—S. L. DOBIE, Esq., Principal Medical Storekeeper,

To—THE HEMP DRUGS COMMISSION.

In returning a list of hemp drug cases admitted into the Madras Lunatic Asylum in 1892, I have the honour to state that I am responsible for the entry of the cause—as ganja—in the first fourteen cases. In no case have I entered it as a cause without such evidence as led me to a reasonable belief that it was so. I have not accepted the mere statements of ganja being a cause as entered in the admission papers any more than I have accepted the statements made by relations to the effect that the new moon is a cause of insanity. Cases 15, 16, 17 were admitted after I left the Asylum.

The only case which calls for comment is that of Kunji Kalappen, as I found yesterday, in reading his case, that his servant finally acknowledged that he took ganja during three months before his admission, and that after taking it he often laughed strangely, and that he had none for one or two or three days before admission.

The two following are more important cases: Kunnaye Pillai (criminal), admitted 31st May 1886, cause unknown, who has often been discovered in possession of ganja in the Asylum and Jail. In association with these discoveries the man has been noisy and excited on a sufficient number of occasions to make it reasonable to believe that the ganja was a cause of the excitement; and the same may be said of Ragaven (criminal), admitted 8th May 1889.

In conclusion, I have the honour to state that I have communicated to Dr. Warden my reasons for not returning cases of insanity due to ganja under the heading of "Toxic insanity."

VIZAGAPATAM LUNATIC ASYLUM (MADRAS).

(SUPERINTENDENT, DR. LEAPINGWELL.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from Superintendent, etc.
Pasupaleti Narasinham; Vishnava; Petition-writer; Godavari; 19; No. 58.	Ganja...	Toxic insanity.	Indifferent.	Form C shows that the cause of insanity is "moral," that it is "unknown" whether it is hereditary, whether a first attack and of how long duration, and that the man is dangerous to others. Dr. Carruthers says: "His condition appeared to me at first mainly due to the abuse of ganja, an enforced abstinence from which greatly improved his state and left him calm and coherent. At the close of the time of observation, however, he again became excited and noisy. This alternating with periods of sullen silence and others of foolishness, the disease is evidently recurrent." "He has shown no signs of improvement, but has become decidedly worse. I recommend his removal to a lunatic asylum." Admitted, 18th June 1892. Discharged cured, 24th November 1892.	There is no case book entry in this case after 1st July 1892. There is a pencil entry on two of the papers "grandfather was insane." The Superintendent says that the patient's mother or grandmother visited the Asylum and told him that the lunatic's grandfather had been insane. No entry was, however, made in the register. The cause had already been entered.

NOTE.—The total admissions in 1892 are—

Criminal ...	Male ...	1
	Females ...	...
Non-criminal ...	Males ...	4
	Females ...	3
	TOTAL ...	8

Of these, the one case given above is shown under ganja in Statement VII and under Toxic insanity in Statement VI.

Report of Surgeon-Lieutenant-Colonel A. H. Leapingwell, Superintendent, Vizagapatam Lunatic Asylum, on the case ascribed to hemp drugs in 1892 (No. 83, dated 5th May 1894).

In reply to your letter No. 264, dated 21st January 1894, I have the honour to report that I have not been able to obtain any further information regarding the lad Pasapaleti Narasinham from the Joint Magistrate, Godavari, or the Civil Surgeon, Rajahmundry, as will be seen from the letters herewith forwarded (not printed).

I have, however, succeeded in tracing the lad and find that he is now employed on the East Coast Railway as a peon. He came to me yesterday with his mother, and from them I learn as follows.

The attack of insanity for which he was treated here was the first. He had been smoking and eating ganja occasionally for six months prior to admission. He could not tell me how much he smoked at a time, as he said he never bought any, but smoked what was given him by his companion, whom he joined in smoking. He did not smoke every day, but about once a week. The effects produced were "giddiness" and "laziness." He also drank arrack, and appears to have led a somewhat loose life generally. His mother says that it was not the lad's grandfather, but her grandfather, who was insane, and that she knows of no other relations who were insane.

When admitted into the Rajahmundry Jail he was suffering from insanity with excitement, and his mental disorder was consequently described as "mania." After admission into this Asylum he was never at any time excited, but greatly depressed, crying and refusing food, so that it was necessary for the first two months to frequently feed him with the stomach tube. His condition then could only be classed as "melancholia." His weight on admission was 75 lbs. and he gained 18 lbs. in weight while under treatment. His mental condition at once improved when he began to gain weight, or, in other words, as soon as his general health improved.

With reference to the last paragraph of your letter, in which I am required to give a clear opinion as to the type of insanity and the cause, I can only say that in this case we have an instance of a lad with a history of insanity in the family whose health from some cause completely broke down, and, as a result, insanity supervened, at first with excitement and subsequently with depression, and that as soon as his physical condition improved his insanity disappeared. Such cases are seen every day in Asylums. To what extent the smoking of ganja may have contributed to his debilitated condition, which in my opinion was the immediate cause of his mental disorder, I am unable to say, and I do not think it is possible for any one to give a more definite opinion in this case.

CALICUT LUNATIC ASYLUM.

(SUPERINTENDENT, DR. CARRUTHERS.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and by inquiry from the Superintendent.
Jacob, Christian, Malayalam, Cooly, Malabar, 40, No. 494.	Ganja...	Toxic insanity.	Bad ...	The Form C shows the type of insanity as "Melancholia." This, as the first attack, duration unknown. "Said to have been caused by intoxicating drugs, probably ganja." Not hereditary and no injury from violence. The Civil Surgeon on 26th August 1892 certifies the man's state of health as "good." He says "his mind is very much affected. He scarcely understands the simplest question, and if he does, gives irrational or irrelevant answers. Is very dirty and apathetic, sitting alone in a corner. Evidently sees imaginary objects. Dirties his cell." Admitted 9th September 1892. Died 19th October 1893.	The first entry in the Asylum Register is 1st October 1892. "Health bad. Constantly cries. Answers no questions. No sleep at nights. Does not take his food. Has to be fed. Totters about while walking and falls down and hurts himself. Very dirty. Howls at night. Admitted into hospital." 10th November—"Gets epileptic fits. Noisy. Incoherent. Refuses food. Has to be fed." 12th December—"In the same state." 7th February 1893—"Improving in health. Mind in the same state." 20th April—"Gets no fits. Health much improved. Gained in weight. Mind is also improving." He is practically in the same state until 20th September, when he is stated to be "suffering from paralysis," and he died on 19th October. There was no "*Post-mortem*." The Hospital Register shows that the disease was diagnosed as "General paralysis of the insane."

NOTE.—The total number of admissions in 1892 was—

Criminal ...	Male ...	1
	Females ...	...
Non-criminal	Males ...	16
	Females ...	4
	TOTAL ...	21

Of these, only the one above case was attributed to hemp drugs.

REPORT OF SURGEON-MAJOR H. ST. C. CARRUTHERS, SUPERINTENDENT, CALICUT ASYLUM, ON THE CASE ATTRIBUTED TO HEMP DRUGS IN 1892 (NO. 114, DATED 12TH MAY 1894).

With reference to your letter No. 264 of 21st January 1894, forwarding to me, for further enquiry and report, the case of deceased insane Jacob, I have the honour to enclose herein, in original, a report from the Police Inspector of Kottayam about the past personal and family history of the man submitted through the Joint Magistrate of Malabar.

2. The only source of information to me of the lunatics in general is the certificate Form C, forwarded with the warrant in each case, and in this particular instance the cause of insanity was attributed to "intoxicating drugs, probably ganja," which was duly entered in the Admission Register. But, as you will see from the enclosed report, Jacob's insanity is now asserted to be due to hard drinking, and *not* to the use of ganja or other drugs.

Case of deceased insane Jacob.

Kali, *alias* Ipeca, wife of Jacob, stated: "Jacob was my husband. In 1891 I with the above Jacob and four children converted to Christianity, and changed residence from Anjerakandy to Illikumm. Jacob was wholly given up to drinking of toddy and arrack when in Anjerakandy. He was not taking *ganja* or other hemp drugs. He once showed signs of insanity when in Anjerakandy some 4½ years back. Insanity is not hereditary in his family. He was all right after he came to Illikumm. He was not drinking toddy also after he came to Illikumm.

On local enquiry made with the comrades and others of Jacob in Nither, I find that he was not given up to the use of hemp drugs at all, and that the insanity is due, in my opinion, to the after-effects of drinking toddy and arrack.

COLABA LUNATIC ASYLUM (BOMBAY).

(SUPERINTENDENT, DR. BOYD.)

Hemp Drug cases admitted during 1892.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
1. Nama; Hindu; Lababoure r; Bombay; 25; 1-*b*—96.	Ganja smoking.	Toxic insanity.	Very weak.	The only paper in this case is a medical certificate from a Native Medical Officer at the Jamsetji Jeejeebhoy Hospital, dated 4th January 1892, that "the patient has a stupid look, does not answer questions rationally, always raves day and night, is dirty in his habits, and is labouring under a delusion that some persons persecute him." It is stated also that "he tears bed clothes and breaks dishes and plates, and often tries to run away from the ward," &c. Admitted, 4th January 1892. Discharged cured, 29th September 1892.	On 10th March 1892 the man "seems to be much improved. Is clean in habits and answers questions very rationally." On 26th July 1892 "he is still unfit for discharge. This morning he violently assaulted one of the insanes in presence of the Superintendent." On 26th September he "seems to be quiet for the past two months and shows no signs of insanity." Discharged. There was rapid improvement in this case. The outbreak in July may have only been a fit of passion. This looks like a ganja case.
2. Yesu Ragho; Maratha; Police Peon; Thana; 30, I. E. 90.	Ganja smoking.	Melancholia.	Fair ...	The Civil Surgeon of Thana shows the cause of insanity as "unknown," but mentions that the man smokes ganja, and this is ultimately entered as the cause. The medical certificate, dated 26th January 1892, shows that he "does not answer any questions put to him and no amount of persuasion or threat induces him to speak, has a vacant look about him. Sleeps and eats indifferently. Is distinctly melancholic.". He was found travelling in third class without a ticket and unable to account for his action. Admitted, 30th January 1892.	On 21st December 1892 (after nearly a year) there is "no improvement. He is melancholic. Refuses to speak. Will not eat. He is suffering from partial paraplegia. He is solitary in habits and has to be fed." On 28th June 1893 "no better." He has now got paraplegia. He is not improved. He is still paralytic and refuses to speak. The Superintendent doubts very much this being a ganja case. He thinks that the history of the case is against it. Experience shows that ganja cases rapidly improve unless there is hereditary tendency, and ganja is only exciting cause.
3. Moti Ram; Kunbi; Dooly-bearer; Rai Bareilly; 26.	Ganja smoking.	Mania ...	...	The Form C shows that this man had been ill for two months and was "homicidal occasionally." The attack was insidious and preceded by moroseness and tendency to wander. The medical certificate of 6th November 1891 shows that he "is of stupid appearance, talks incessantly and mutters a great deal to himself. Only violent once since his admission into Civil Hospital [Aden] when he threw his *lota* violently 6 or 7 times. Has been violent several times during the time he was kept under observation at the Native Military General Hospital. The Military Hospital history shows that, on 7th September 1891 when admitted, the "patient was talking incoherently and shouting out..... passed very restless night. He answers questions sometimes coherently and then breaks off into nonsense. Pupils equal; normal. Patient has a vacant smile on being addressed by me... 9th September 1891, last night very violent; ran away to cattle lines....10th September 1891. He	Admitted here on 1st February 1892. On 11th March 1892 "he is improved and fairly quiet, but mutters to himself and solitary in his habits. Sleeps and eats well." 29th November "discharged yesterday by order of the Deputy Commissioner of Rai Bareilly. The Asylum authorities have diagnosed the case as "Toxic Insanity," owing to inquiry after his admission here. The Superintendent thinks that the previous hospital history points to ganja, the violent excitment, the running about, the delusions, &c. All these would be in acute mania and this cannot be differentiated from toxic mania unless there is narcotic effect. What ganja generally produces is acute mania. Toxic insanity is only differentiated by its cause. It is not a separate type.

Hemp Drug cases admitted during 1892—contd.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
Moti Ram.—*contd* ...	Ganja smoking.	Mania ...	...	has a dazed look and answers some questions correctly but then wanders off...11th September 1891 : Passed quiet night, crying this morning; said his father had died...12th September 1891 : Quiet, answers rationally occasionally...14th September 1891 : Troublesome, talking nonsense. sleepless. 21st September 1891 : Is quiet, but talks incoherently, 22nd September 1891 : Vomited twice; has to be forced to take food. 23rd September 1891, vomited again, complains of thirst. Bowels regular, more rational. 25th September 1891, condition much the same; smiles when talked to and occasionally answers correctly.....dated 23rd October 1891 : For the last month has been quiet but foolish, ready to weep or laugh at the slightest thing. To-day he was again restless and troublesome, but for no particular reason... dated 26th October 1891 : Violent. Got away from attending men and picked up large stones in Hospital compound and threatened any one near,.....28th October 1891 : Violent again; ran to bazar. When seen by me was quiet. Answers questions sensibly." Admitted, 1st February 1892. Discharged improved, 28th November 1892.	
4. Damodhar; Brahman; occupation unknown; Kutch; 25; 1 b.—122.	Bhang drinking.	Toxic insanity.	Good...	Form C shows this as a "first attack, sudden, and due to the drinking of bhang and of nine months' dutation." The medical certificate of 21st April 1892 says, "He is constantly talking, bawling out, uses abusive language, tears up his clothes, refuses food, does not sleep. At times he gets violent and is quite unmanageable. Is cleanly in his habits." Admitted, 21st April 1892. Discharged cured, 28th March 1893.	On 7th May 1892, "He is a little better, but is still rather excitable and noisy. Sleeps and eats well and does not tear his clothes." On 24th March 1893, "He seems to have quite recovered and seems to be rational in every way. Discharged. Between 7th May 1892 and 24th March 1893, his improvement had been steady. This seems, in the Superintendent's opinion to be a case of insanity due to hemp drugs. The improvement began soon and went on steadily.
5. Moti; Hemraj; Hindu; Shroff; Bombay; 52; 1-b.—108.	Ganja smoking.	Toxic insanity.	Good	Form C shows that this is "a first attack; duration one month; came on suddenly; preceded by fever; due to excessive ganja smoking. Suicidal, has a desire to throw himself from a height, violent at times, rushing at people to assault them; cleanly in habits." The medical certificate of 14th March 1892, says. "He is incessantly talking to imaginary persons, does not reply to questions put to him, spits at those around him; does not sleep, when excited uses abusive language and is unmanageable. Admitted, 14th March 1892. Died, 11th December 1892.	On 29th April 1892. "He is not improved since admission. Always talking to himself and waving his hands about. Is melancholy and dirty in habits. Died on 11th December 1892, from dropsy and old age. There was no *post-mortem*. The "Toxic insanity" is diagnosed from the alleged cause. The absence of improvement seems against the purely ganja causation of the insanity.

Hemp Drug cases admitted during 1892—contd.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
6. Mahomed Safdar; Mussalman; Fakir; Bombay; 22 1-b.—134.	Ganja smoking.	Toxic insanity.	Good	Form C shows that nothing is known of this man. The medical certificate merely says that "he will not answer questions put to him, goes about naked, does not sleep, laughs without cause, uses abusive language, at times is very excited when he becomes quite unmanageable." Admitted, 26th May 1892.	On 22nd August 1892. "He is not improved much. He laughs to himself and talks nonsense." He is still in the same state without improvement. The case has been diagnosed and the cause entered on the examination of his friends. But there is no entry of this examination in any way except the mere entry of the cause in the form. There is no differentiating symptom. The man denies the use of ganja. He smiles at the name of charas and says he knows what it is quite well; but he denies its use also.
7. Chintamon; Brahman; Student; Bombay; 25, 1-b.—1.	Ganja smoking.	Toxic insanity.	Good	Form C shows that the man was not addicted to drugs; that this is a first attack, that it came on suddenly and has lasted three months, and that the supposed cause is unknown. There is no hereditary predisposition. Medical certificate of 16th June 1892, says, "He will not reply to any questions put to him, howls out, tears off his clothes, goes about naked, refuses food, and when given to him tramples it under his feet. At times is violent and unmanageable." Admitted, 16th June 1892. Discharged, 21st February 1893.	Admitted 16th June 1892. On 13th September 1892. "No improvement. Noisy. Refuses food. Sleepless and goes naked." 21st February 1893. Discharged without improvement on security of his friends. The "Ganja smoking" in the Asylum record is said to be based on inquiry from friends; and the Superintendent thinks further inquiry advisable.
8. Vithu; Hindu; Labourer; Ahmednagar; 25, 1-b.—7.	Ganja smoking.	Toxic insanity.	Fair ...	In Form C. the cause is first entered as "unknown" and then "ganja smoking" is added. Nothing is known of the case except that the man is homicidal and dirty in his habits. The "Appendix I" or medical history sheet shows that the man "is charged with having assaulted a strange woman without provocation or previous knowledge on 17th June 1892 under the belief she was an evil spirit." The medical certificate of 14th July 1893 says he "is incoherent occasionally, has delusions, that he is haunted by ghosts. He says he looked on the women he stabbed before he was sent here as an evil spirit. Is restless at nights. He is quiet during the day, but when the night comes on he says devils haunt him. Dirty in his habits." Admitted, 21st July 1892; discharged recoverd, 28th September 1892.	Admitted 21st July 1892. On 26th September it is said: "He has shown no signs of insanity since his admission. He has been quiet and well behaved and has worked as a carpenter." Discharged accordingly. This man's was no doubt really a case of intoxication rather than insanity, the Superintendent thinks. He was entered as Toxic insanity from the police record, but was quite "sane" before he reached the Asylum.
9. Gurudatt; Hindu; Labourer; Rai Bareilly; 38; 1.—13.	Bhang and ganja.	Toxic insanity.	Good	Form C shows under "character;" Given to excessive ganja smoking, drank bhang only occasionally. "He suffers from "chronic mania, a first attack, of 1½ years' duration. It began with a headache and giddiness and gradually he began to say everything belonged to himself, until at last he broke out into open violence.	11th November 1892 (three months after admission) "No change since his admission; is very melancholic. Refuses food. Refuses to speak and is sleepless at night. He is in the same state still, he is fairly rational, and freely admits the use of ganja. He thinks the admixture of charas improves ganja. He says dhatura seeds

Hemp Drug cases admitted during 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
Gurudatt—*contd.*	Bhang and ganja.	Toxic insanity.	Good	Has high notions about himself. Had frequently attacks of fever (malaria) in the Tansa Valley, during which delerium was a marked symptom. No injury to head or sunstroke." (This comes opposite "supposed cause.") "No hereditary predisposition. No suicidal impulses. Is noisy and dangerous occasionally." Appendix I shows as the "probable cause" "drinking bhang and smoking ganja coupled with exposure to strong sun and malaria." The medical certificate, dated 27th July 1892, says "He is violent without provocation, abusive, restless, sleepness at night, refuses food, incoherent; often does not answer when spoken to. Not particularly dirty in his habits, often laughs without reason. Constantly mutters to himself." Admitted, 4th August 1892.	are bad as producing too much intoxication, but that the dry leaves are useful against fever and rheumatism. He has taken dhatura leaves for this purpose. It is noteworthy that this man has a scar on the wrist and two on the temples from "firing." This was done by his friends for insanity, one scar when he was a boy, the other more recently. This man was employed in the Tansa Water Works as mukaddam. He has been apparently insane for 2½ years now and is no better. The symptoms are compatible with ganja, and this may have been a ganja case. He may have been taking ganja for the year and half and so keeping up the insanity which may thus have become chronic, the Superintendent thinks the fever, &c., are causes that would probably be ephemeral in their action.
10. Birji Makji; Hindu; Priest; Bombay; 45; 1-b—18.	Ganja smoking.	Melancholia.	Very weak.	Form B shows that the attack has lasted three months and is supposed to be due to ganja smoking. The man is suicidal, but not dangerous to others. The medical certificate of 6th September 1892 shows that he "is sad and listless, takes no notice of what goes on around him and is irrational in his replies, and very difficult to get him to speak. Has a dazed stupid look." Admitted, 6th September 1892. Died, 8th September 1892.	This man died two days after admission of fatty degeneration of the heart. Nothing is really known of his mental history in the Asylum. The cause "ganja smoking" was entered after inquiry from friends. There was no *post-mortem* examination.
11. Deolo; Hindu; Labourer; Guzarath; 25; 1-E. 95.	Ganja smoking.	Toxic insanity.	Fair.	Form C shows the cause of insanity as "unknown," but under "character" "given to indulgence in ganja smoking." The type is entered as mania, nothing else is known. The medical certificate, dated 11th October 1892, shows that he "has a peculiar maniacal gait, does not answer questions rationally, talks incoherently, laughs and smiles without any cause." He was charged with voluntarily causing grievous hurt. Admitted, 15th September 1892.	On 21st December 1892 (three months after admission) "he is a little better since his admission, but is solitary in his habits and laughs and talks to himself, clean in habits. Eats and sleeps well ("improving"). On 28th June 1893: He is improving, but very slowly, is sad and melancholic, mutters to himself, eats and sleeps well and works as a wheat grinder (appears better). He is still improving, but slowly. This may be a ganja case. He admits the use of the drug, and says he would certainly use it again if released.
12. Vishnu Laxman; Brahman; Priest; Konkan; 36, 1-B.—30.	Ganja	Toxic insanity.	...	Form C shows under "character" that the lunatic "eats tobacco, smokes ganja sometimes." He suffers from "General mania," of which this is the third attack. It has lasted 25 days, and was insidious, preceded by sleeplessness and refusal of food. The man says "he had syphilis." The supposed cause is "moral disappointment." The father is an epileptic. The medical certificate, dated 2nd November 1892, says "Expression of countenance wild, forwning. Gets excited, gesticulates, and speaks fast, loud, and incoherently. Uses	In this case we have, the Superintendent says, a distinct epileptic history; and epilepsy and insanity go hand in hand. The children or grand children of epileptics are often insane. Here then there is distinct evidence of hereditary tendency. He was admitted on 19th November 1892, and on 7th March 1893 there was "no improvement in his condition. Very noisy and sleepless at nights. Throws away his clothes and goes naked. Mutters to himself and is incoherent." He is in the same state still. This

Hemp Drug cases admitted during 1892—contd.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from registers and from inquiry from the Superintendent.
Vishnu Laxman—*contd.*	Ganja	Toxic insanity.	...	obscene language, sings religious, amorous or lewd songs. Is sleepless and restless. Eases in his room on the floor instead of using pans. Draws obscene pictures on walls. Has a delusion that his wife is unfaithful to him. Says that he beat her because she served good food to Rama Telang and quite plain to him. Has a delusion of one Radha Poone Karim being in love with him, that she gave him syphilis and therefore he turned gray. Has a delusion that he ought to have been long since promoted from the Rs. 15 to Rs. 18 as a Talati, and that no notice has been taken of his three applications for the same. Says he ate tobacco and smokes ganja sometimes. Was forwarded to Colaba Asylum with certificate No. 114, dated 2nd May 1887. His brother, Rambhat Laxman Pardhit, says that he has been subject to fits of insanity for 17 years past.....eats a good deal of tobacco. He was sleepless for 12 days and refused food previous to the onset of the paroxysm. His father was an epileptic. He was treated for insanity in David Sasson's Hospital in 1884 and at Colaba Asylum in 1887." He was arrested at his brother's request. He was pelting people with stones. Admitted, 19th November 1892.	does not seem to be a ganja case, though possibly the ganja may have excited this particular outbreak. The man says there is no harm in ganja in respect to religion: therefore he took ganja. It is a good thing to take for those who have not too much to eat or who are ill or growing old.
13. Nevel Singh; Hindu; Sepoy; Rohtak; 20; 1-b.—36.	Ganja smoking.	Toxic insanity.	Good.	This man's papers have been sent with him to Delhi.	The Asylum Register shows the cause as "ganja smoking," and that this is a second attack, having lasted six months. "He incessantly talks, uses the most abusive language, tears up his clothes, does not sleep, is filthy in his habits, spits at those around him At times becomes violent and unmanageable." He was formerly discharged from the army on account of insanity when he re-enlisted. He did not improve during his stay in the Asylum.

NOTE—The total number of admissions into the Colaba Asylum for 1892 was—

Criminal	Males	...	9
	Female	...	1
Non-criminal	Males	...	125
	Females	...	27
		TOTAL ...	162

Of these, the above thirteen were attributed to hemp drugs in Statement VII, and were classed under Toxic insanity in Statement VI.

The 30th September 1893.

Report of the Superintendent, Colaba Lunatic Asylum, Bombay, on the Hemp Drug Cases of 1892.

With reference to letter No. 149, dated 16th October 1893, paragraph 2, from the Secretary, Indian Hemp Drugs Commission, and $\frac{G.R.}{G.D.}$ No. 4107 of the 16th November 1893, I have the honour to submit a further report on the 13 cases admitted during the year 1892 as follows:—

CASE NO. 1.—NAMA ANANTA.

The Commissioner of Police, Bombay, in his letter No. 7849—3, dated 4th December 1893, states that no information can be obtained, as neither he nor his relations can be traced. This is a case in my opinion of acute ephemeral mania due to hemp drugs. think the outbreak of the 26th July was simply anger and had nothing to do with the mental condition. The information, I believe, was obtained from his friends.

CASE NO. 2.—YESU RAGHO.

The Civil Surgeon, Thana, in his statement forwarded with letter No. 169 of the 15th November 1893, from the first class Magistrate of that district, states that there is no past personal and family history in his hospital relating to this case. This is not in my opinion a ganja case. The partial paraplegia shows that brain disease is the cause and melancholia is the natural form for the disease to take in that case. I reject this as a ganja case.

CASE NO. 3.—MOTI RAM KUNBI.

The Staff Surgeon at Aden, in his letter No. 59, dated 15th November 1893, to the first class Magistrate, Aden, states that his friends deny that he ever used ganja. I think myself that though a case of acute mania it was not due to ganja, because it came on in a very insidious way which is unusual in ganja and was preceded by moroseness and a tendency to wander. Besides, the long period under treatment is against the theory of hemp origin.

CASE NO. 4.—DAMODHAR BRAHMAN.

The Commissioner of Police, Bombay, in his letter No. 7849—3, dated 4th December 1893, states that he was addicted to ganja, bhang and majum, but nothing was noticed until the death of his wife and child, when he changed his habits and was found to have taken to drugs. There is no hereditary tendency, and I think that the history and symptoms both point to hemp drugs, though the bereavements may have had to do with it. I should therefore say that this is a case of acute mania due to hemp drugs.

CASE NO. 5.—MOTI HEMRAJ.

The Commissioner of Police, in his letter No. 784—3, dated 4th December 1893, states that he commenced smoking ganja in his native country, Kathiawar, before he came to Bombay, at the age of fourteen years. His sons and brothers, who are living in Bombay, are not addicted to ganja-smoking; his parents died of natural causes. I do not however believe ganja was the cause in this case. This was a case of melancholia with excitement, and not mania. He died from dropsy and old age, showing disease of the kidneys, and possibly consequent disease of the brain; this would be sufficient cause as shown by the prolonged absence of improvement.

CASE NO. 6.—MAHOMED SAFDAR.

The Commissioner of Police, Bombay, states that none of the relations of this man can be traced. Said to have lived by begging and was given to ganja-smoking. This is a doubtful case, The man is still in the Asylum and not much improved, and denies the use of ganja; but probably as a beggar he did use the drug, and that may have been the exciting cause, but that is only a probability though the symptoms are those of mania due to toxic causes. I regarded it as a doubtful case.

CASE NO. 7—CHINTAMON.

It is stated by the Commissioner of Police in his letter No. 7849—3, dated 4th December 1893, that he had been in the habit of smoking ganja from childhood. About 3 years ago he showed signs of insanity but recovered soon. In June 1892 he was found wandering in the streets, was violent and noisy. He was arrested by the Police, sent to the Asylum under a certificate from the Police Surgeon. Since his discharge from the Asylum he has not exhibited any signs of insanity.

I think ganja was the exciting cause in this case—the exciting cause only—because there was no improvement. But after his discharge he suddenly recovered and has not had another attack up to now. This is another reason for thinking it not a ganja case. If addicted to hemp drugs, he would probably indulge and have a relapse. It is a case with maniacal symptoms, but I regarded it as a doubtful case. It may therefore be allowed to remain under toxic insanity.

CASE NO. 8.—VITHU, HINDU.

The Civil Surgeon, Thana, in his statement forwarded by the first class Magistrate of that District, states that no family history is available as the man is not a native of that town. It is stated that in the hospital he was quiet during the day, but always excited at night. He was incoherent, unmindful of his person, dirty in his habits and inclined to assault without provocation. The man was however sane whilst in the Asylum, but had to be shown in the books. His friends who visited him here said that he was addicted to ganja. The symptoms, as described by the Civil Surgeon, Thana, are those of acute mania and look like a case of toxic insanity due to hemp drugs.

CASE NO. 9.—GURUDATT, HINDU.

The Civil Surgeon, Thana, states that his family history cannot be ascertained as he is not a native of Thana. The information obtained from his wife is that he gave himself up to the immoderate use of ganja some time before he was taken ill. Three or four *chillums* used to be his allowance. Three or four years ago he was taken ill when he used to be violent even to his friends and relations without provocation. This is not a ganja case. Ganja may have been the exciting cause, but not the predisposing cause. There is a previous history of insanity in this case. The symptoms are those of acute mania, but not due to hemp drugs.

CASE NO. 10.—BIRJI MAKJI.

This is undobtedly not a ganja case. The man died from anæmia and fatty degeneration of the heart. This was a case of melancholia due to causes stated above. The information recorded about ganja was obtained from his friends on admission, but none of his relations can now be traced in Bombay. This insane was admitted here as a private patient.

CASE NO. 11.—DEALO.

The District Magistrate, Surat, in his letter No. 1062-M., dated 16th November 1893, states that on enquiry no adult male member of the lunatic's family can be found from whom the information required can be ascertained. This is a doubtful case. I do not believe the insanity was primarily due to ganja, though that may have been the exciting cause. This is a case of mania, but not due to hemp drugs. It is a doubtful case.

CASE NO. 12.—VISHNU LAXMAN.

The Assistant Surgeon in charge Alibag states in his letter No. 295, dated 14th November 1893, to the 1st class Magistrate of that District, that Vishnu was subject to occasional attacks of acute mania caused probably by ganja smoking. In this case there is distinct epileptic history in his family. His father was epileptic. Ganja may have been the exciting cause where there was predisposition, but it is not a ganja case. I would class this case under epileptic insanity, though ganja may have been the immediate exciting cause.

CASE NO. 13.—NEVEL SINGH.

There is no further information about this case. The fact of want of improvement is against ganja. I should not put the case down to hemp drugs. This man made no improvement during his stay in this Asylum. He suffered from symptoms of acute mania, but it is doubtful about the cause being ganja. He was transferred to the Asylum at Delhi after his stay in this Asylum for about two and a half months. The Commissioner of Police in his letter states that he was found to be a dangerous lunatic and was sent to him by the military authorities for an order to be placed in the Asylum.

POONA LUNATIC ASYLUM.

(SUPERINTENDENT, DR. MCCONAGHY.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
1. Guljarsha Gulabsha; Mussalman; Fakir; Bombay; 75—97.	Ganja smoking.	Acute mania.		FORM C SHOWS— 6. He has been a ganja smoker. 7. Form of mental disorder, acute mania (religious). 8. First attack. 9. Duration of attack unknown. 12. Supposed causes "the above mentioned ganja smoking and religion and isolated habits." 13. Hereditary predisposition "unknown." Certificate of Medical Officer, dated 7th July 1892, shows "he talks incessantly. Labours under delusions. Says he lives on earth and leaves." He is stated by his attendants to talk incoherently, and he is suffering "from religious mania." Admitted, 13th July 1892. Discharged "cured," 6th October 1892.	He showed no symptoms of insanity after admission. He was quiet and harmless, eating well. He remained thus during August and was then reported to the visitors for discharge. In the Sassoon General Hospital on 7th July 1892 this man stated that he had "suffered from the effects of ganja some four or five years ago for which he took native medicines and got cured. He was noisy, spoke incoherently, slept well till 4 A.M. and afterwards began to rave."
2. Rang Nath Trimback Moodliar; Hindu; occupation not kown; Madras; 25—96.	Bhang drinking.	Acute mania.		FORM C SHOWS— 6. Drinks bhang. 7. Acute mania. 8. First attack. 9. Duration of attack one year. 10. Attack insidious. 12. Supposed cause "unknown." 13. Hereditary predisposition "unknown." Medical certificate Form A shows—"He has a wild expression of countenance. He talks at random. Refuses his food. His brother states that he assaults persons without cause." Admitted, 12th July 1893.	The Asylum history shows that "he has a wild expression, is very troublesome to his relatives. He looks always angry and never talks with any body, lives in a very clean state, eats well and sleeps well. "Cunjunctiva red" on admission. From that time forward the entry is "No change" every month. He has not improved at all. He tells us he does not smoke ganja, but drinks bhang for five or six years which he calls the leaves of ganja. He took two pice worth a day. He liked it after labour to refresh him. He used also to take liquor. In the Sassoon General Hospital papers it is recorded that "the police say that the patient sleeps well. He is not restless or noisy, when questioned answers well. He states that his brother has sent him here purposely" (5th July 1892). "Patient has a wild expression of countenance, talks at random and refuses food." (7th July 1892).
3. Trimbak Vinayak; Hindu Brahmin; Foreman; Railway; Ahmednagar; 20—90.	Ganja.	Acute mania.		FORM C SHOWS— 6. He is a ganja smoker. 7. Acute mania. 8. First attack.	The Asylum history shows on admission "he talks incoherently, is restless and excitable. He tears his clothes, is very dirty in his habits. On 15th July. "By application of blister on nape of neck, patient became a little sane."

Hemp Drug cases admitted during 1892—contd.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
Trimbak Vinayak—*contd.*	Ganja.	Acute mania.		9. Duration of attack one month. 10. Attack sudden. 12. Supposed causes "ganja smoking and abstinence from food." 13. No hereditary predisposition. 16. Subject to homicidal impulses. Medical certificate dated 11th June 1892 shows "He talks nonsense and labours under delusions. He is violent, beating those around him." His father states that he assaults people: tears his clothes and abuses his relatives: destroys walls, &c." Admitted, 14th June 1892. Discharged, 31st August 1892.	On 15th August "improving," 31st August "much improved and handed over to his friends." The Sassoon General Hospital papers show that "the exciting cause given by the father is that he quarrelled with him for not giving him money and on that account he remained without food for three days. Since that day he is behaving in this [violent] manner. On observation the patient is found well. He is habituated to smoke ganja and eat majoom. Does not sleep soundly." (10th June 1892).
4. Laxman Nand Ram; Purdesi; Hindu; (sweetmeat) Shop-keeper; Poona; 24—89.	Ganja and liquor.	Chronic mania.		FORM C SHOWS— 6 It is stated that he drinks country liquor and ganja. 7. Chronic mania. 8. First attack. 9. Duration 2½ years. 12. Supposed causes unknown. 13. No hereditary predisposition. Medical certificate shows. I.—He has apathetic restless look. II—He labours under delusions, imagining himself a rajah, he is single; but says he has two or three wives and four children. His brother states that he is violent and irrascible without cause and labours under delusions Admitted, 1st June 1892.	The Asylum Register shows that on admission "he talks incoherently, his expression and general behaviour is that of one of unsound mind, eats little, restless at night and eyes red. He is ganja smoker.". There is "no change" until 30th November, when "he is now quiet and obedient, sometimes speaks to himself." On 1st January 1893, "he is slighly improving, working in the garden and remains quiet." After that, there is no change. He tells us he smokes ganja occasionally, but not regularly. He has smoked for ten years. He never took dhatura, though many others do, with the ganja. He once drank bhang. He drank liquor frequently for years. He made majum with bhang and sold it. The Sassoon General Hospital papers show nothing new.
5. Paras Ram; Hindu; occupation unknown; Jalgaon; 32—80.	Ganja.	Toxic insanity.		The Form shows that the man "smokes ganja, and is afflicted with delusional insanity. It is his first attack and has lasted 7 years. He says he had an illness seven years ago, but does not give a clear account." The "supposed cause" is not entered. The medical certificate dated 19th January 1892 says "he says he is a barrister practising at Bharswal, Akola, and other places. That he is jailor at Bharswal. That he is Raja of Khandeish. In talking he strings together words such as European Magistrate promotion, &c., without apparent connection." He is said to have entered several offices (by the window) without business and refused to leave. Admitted, 17th February 1892.	The Asylum History shows that on admission "he is noisy, irritable, refuses to take his food, has a vacant and excitable look, is dirty in his habits, incoherent in his speech." There is "no change" until 15th August 1892, whence "sometimes speaks rationally." On 15th November 1892 he "is slightly improving, gives answers rationally." Then "no change" until 31st May 1892, when he is "sometimes quarrelsome for food, otherwise speaks rationally." He says he used to smoke ganja, but gave it up five or ten years ago. He does not seem to know anything of any old illness. He gave up ganja because his relatives objected. He only took bhang on Shiwaratri and never took liquor. He never took dhatura, but he mixed opium and nut-meg and sugar cane juice with ganja sometimes.

Hemp Drug cases admitted during 1892—contd.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
6. Hari Trimbak Ranade; Brahman; occupation unknown; Satara 22—77.	Ganja.	Mania (ganja.)		The Statement shows that he is "in the habit of smoking ganja and suffers from mania. It is his first attack and has lasted 4 or 5 months. It is stated to have been coming on for about a year; said to have been preceded by an attack of cholera." The "supposed cause" is "unknown beyond his habit of smoking ganja." The medical certificate of 11th January 1892 says that he "presents a vacant wandering appearance, is very noisy and excited, persistently refused for a time after admission to take his food, tears the hospital clothing to pieces, is abusive, stands in extraordinary attitudes, is dirty in his habits and declines to wash himself." He is said to sleep badly and to be quarrelsome. Admitted, 17th January 1892. Discharged "cured," August 4th, 1892.	The Asylum History shows that on admission he "is sleepless, refuses his food, spits on his clothes, talks incoherently. He was ganja smoker. Is dirty in his habits." No change till 15th February 1892, when it is said, "since application of the blister to the nape of the neck, he commenced sometimes to talk in sense and sometimes nonsense, asking for food, remains quiet." On 1st March he "is improving, eats and sleeps well and answers rationally." He goes on improving, and on 15th July he is entered as "quite sane."

NOTES.—(1) The total number of admissions in 1892 was—

Criminal ...	Male ...	...	0
	Female ...	...	0
Non-criminal ...	Males ...	...	32
	Females ...	...	4
	TOTAL ...	...	36

Of these the above six are attributed in Statement VII to hemp drugs.

(2) Statement VII shows—

5 cases due to ganja.
1 case „ bhang.
1 case „ spirit drinking.

Statement VI shows—

5 cases of Toxic insanity due to ganja.
1 case „ „ „ „ to spirit drinking.

The Registers of the Asylum show—

5 cases due to ganja alone.
1 case „ ganja and liquor.
1 case „ bhang.
No cases due to liquor alone.

Statement VII therefore agrees with the Registers except that it puts under "spirit drinking" the case ascribed to "ganja and liquor" in the Registers. Statement VI agrees with neither the Registers nor Statement VII. The discrepancy cannot be explained by the Asylum authorities.

(3) It is to be remarked that the type of insanity is entered in the Asylum Registers from the medical certificate received with the lunatic. There is no diagnosis in the Asylum.

15th September 1893.

Report of the Superintendent, Poona Lunatic Asylum, on the Hemp Drug cases of 1892.

With reference to your letter No. 149, dated Simla, 16th October 1893, and accompaniments, I have the honour to state I have communicated by letter with the different Magistrates under whose warrants lunatics suffering from the effects of hemp drugs were admitted into this Asylum in 1892 and up to 16th September 1893, the date of inspection of Asylum by two members of your Committee. Information regarding the previous history of all the lunatics has not yet been furnished, if any facts of importance are subsequently received they will be communicated.

2. The discrepancy referred to in notes appended to " Hemp drug cases admitted in 1892 " is explained as follows :—

Case No. 4, LAXMAN NAND RAM, is returned separately under two headings, *viz.* ganja and spirit-drinking. This is incorrect, as both headings refer to the same lunatic.

The correct statement should be—

	4 due to ganja.
	1 due to ganja and spirit-drinking.
	1 due to bhang.
Total ...	6

The following additional information has been received :—

Case 1, GULJARSHA GULABSHA.—The city Magistrate, Poona, reports that no friends or relations of this man can be traced, hence no information regarding him is forthcoming. It is believed the acute mania from which Guljarsha Gulabsha suffered was due to the excessive use of ganja.

Case 2, RANG NATH TRIMBACK MOODLIAR.—This man is reported in vernacular Yadi received with letter, dated 2nd December 1893, from City Magistrate, Poona, to have been in a good state of health (presumably mentally and bodily) for a year previous to admission. He did no work and drank one or two pice worth of bhang daily at noon but never smoked ganja. When under the influence of bhang, he became violent. The acute mania, for which he was admitted, is said to be the first attack, and I am of opinion it was induced by the excessive use of bhang for a long period.

Case 3, TRIMBAK VINAYAK.—The City Magistrate reports that no friends or relations of this man have as yet been found.

Case 4, LAXMAN NAND RAM.—The City Magistrate reports Laxman Nand Ram was in good health previous to present attack. He had been addicted to ganja-smoking (one or two pice worth daily) for a long time. I am of opinion the continuous use of ganja slowly affected his nervous system and produced the attack of chronic mania, which necessitated his admission.

Case 5, PARAS RAM.—The first class Magistrate, Bhusaval, reports in his letter, dated 6th December 1893, that nothing reliable can be ascertained regarding the early history of this man. His father died at Nasirabad some twenty years ago, and Paras Ram was not afterwards heard of until three years ago, when he was considered a lunatic and remained as such until transferred to this Asylum. The Magistrate further states that, except the report of the Medical Officer, nothing is known in the district as to his having been addicted to the use of ganja or alcohol. From the facts adduced it is difficult to decide whether the insanity is due to the excessive use of hemp drugs or otherwise, but from appearance of patient I am inclined to believe that the use of hemp drugs was the most likely cause.

Case 6, HARI TRIMBAK RANADE.—The Huzur Deputy Collector and Magistrate, Satara, reports that Hari Trimbak Ranade was an excessive smoker of ganja for a long time, but continued in good health until he was seized with cholera four or five months before getting insane. His nervous system was probably impaired by excessive ganja-smoking before the cholera seizure, therefore the latter disease, though it may have hastened the mania, can scarcely be considered a predisposing cause. I am of opinion that the ganja habit would eventually have led to mania, though neither cholera nor other disease supervened.

AHMEDABAD LUNATIC ASYLUM (BOMBAY).

[SUPERINTENDENT (TEMPORARILY), DR. MCCLOGHRY.]

Hemp Drugs cases admitted in 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained by inquiry from Superintendent and from the Asylum registers.
1. Shariz Hamid Gul; Musalman; trader; Surat, 35, No. 101.	Ganja.	Toxic insanity.	Fairly good.	This man is shown in the papers as "intemperate, given to indulgence in liquor, toddy and ganja." He is said to suffer from 'mania.' The cause is not mentioned; but it is merely stated that he "never suffered from concussion, &c." "His elder brother is given to drink and is somewhat eccentric." He "talks incoherently, speaks in whispers, does not answer questions rationally, does not take his food properly, sometimes mutters words without any meaning. He was sent up for examination as to the state of his mind in 1888 to the civil hospital as he was found violent and making mischief in Rander. He was kept under observation for about a month, and his mother having undertaken to look after him, he was handed over to her by the 1st class Magistrate of Surat. From the police report it appears that he is charged with committing sexual intercourse with a a she-goat. He is married but does not live with his wife. 'Indulges in ganja, liquor and toddy." He was admitted into the Asylum on 1st July 1891, released as cured on 27th June 1892, and re-admitted on 1st October 1892 under Rule 2 of Appendix I to Government Resolution No. 1803, dated 3rd April 1889, which requires a criminal lunatic charged with a crime against the person (the cause of insanity being ganja or other intoxicant) to be confined for three years after all signs of insanity have disappeared.	This man was first admitted on 1st July 1891. The first entry in his Asylum history is 16th December 1891. "This patient has shown some improvement in his mental state, but has not been sufficiently long in the Ayslum and is not fit to appear for his trial, June 21st, 1892. Has been steadily improving since last report and is now fit to make his defence." He was released accordingly but re-admitted from Jail under the orders of Government. He has never since then shown any sign of insanity whatsoever. He denies the use of ganja and also the crime with which he was charged. He went to Mauritius in 1873 and returned in 1885. He talks much.
2. Chhotu Singh; Hindu; no occupation; Surat; 22 No. 91.	Ganja.	Toxic insanity.	Strong.	This man's character is "sober. At present sometimes smokes ganja." The supposed cause of of his insanity is "constant headache." The attack was "sudden" and had lasted for "six years." He talks incoherently, wanders about all day. Has illusions and delusions. Talking to himself at times. Constantly singing. Goes about naked at times. Threatens to beat members of his family, though has not done so. Habits clean and takes his food well. Admitted, 1st January 1892.	The Ayslum case book shows that this man "continues unchanged since admission." This man is not rational, but he says he used to smoke ganja regularly. The Deputy Superintendent (H. A. Joseph Solomon) says that his father states that he has smoked since boyhood in bad company of Ghosains, &c.

Hemp Drug cases admitted during 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained by inquiry from Superintendent and from the Asylum registers.
3. Mohandas Tulsidas; Hindu; Mendicant; North country, 30, No. 92.	Ganja.	Toxic insanity.	Moderate.	This man "does not seem to be given to any indulgence." "Acts rudely with the female sex in the temple of Shree Ranchhodji Maharaj at Dakor. Is unable to take care of himself. Seems to be insane from the time he came to Dakor." Nothing is known of the cause or duration of his attack. "He does not answer questions in a coherent manner, laughing and singing. Does not sleep at nights. Has been violent on one occasion." Admitted, 10th January 1892.	This man was discharged on 29th June 1892 "cured." He had only been five months in the Asylum. There is no record of his Asylum history. This is a regular route for mendicants. This man was wandering. He had no friends here.
4. Mahomed Bhai; Musalman; Petty trader; Surat; 35, No. 95.	Ganja.	Toxic insanity.	Good.	This man is "given to indulgence in ganja." This is his first attack and of two or three months' duration. It was preceded by fever. The supposed cause is that he "suffered from injury to the head about 17 years ago." There is no hereditary predisposition. His demeanour is like that of a mad man. At times he is "violent and abusive. Does not answer questions rationally. Talks incoherently and gets very noisy. At times he talks rationally."	Admitted, 17th March 1892. In August 1892, "he continues the same. At times he is violent and even dangerous. Frequently abusive. Subject to epileptic fits which recur at intervals of about two months and last for about 15 minutes." In June 1893, "subject to frequent fits of epilepsy and continues perfectly insane." He admits the use of ganja and asked for it. He is irrational still. The insanity may be due to epilepsy. The only suggestion of ganja is in the history. The entry of the cause is made when the man comes into the Asylum with his papers if it is shown in the papers, otherwise it is ascertained from friends if possible.
5. Jetha Manji; Brahman; Mendicant; Ahmedabad, 30, No. 96.	Ganja.	Toxic insanity.	Good.	"This is the first attack, but it took place about a year ago." "He was not treated regularly, but went wandering about." Cause not known. No hereditary predisposition. "Inclined to be violent." Talks incoherently, behaves like a madman; was found wandering.	Admitted on 1st May 1892 and discharged on 29th July 1892 "cured." There is no record of his Asylum history. He was practically sane when he came into the Asylum. He and his friends both stated that he smoked ganja. He said he would never do it again. He said it had injured him.
6. Ravishankar; Brahman; Beggar; Broach; 23, No. 99.	Ganja.	Toxic insanity.	Weak.	This man was "given to indulgence in liquor and ganja." This is his first attack, but of three years' duration. It was sudden. He had "suffered from malarial fever." The supposed cause is "moral," no hereditary predisposition. He was in the Civil Hospital for fever. He had a "vacant look, dirty habits. Sits for the whole day and night without uttering a word. Does not speak when spoken to, not even asking for food. Ran away from the hospital twice. Sometimes passes sleepless nights. His father states that he ran away from home and sat near Ramkund for 2 or 3 days without food. Tried to kill a boy of unsound mind. He cut the tail of a buffalo, donkey and goat. Once brought a fowl and killed it in the house: used to beat his parents sometimes." Admitted, 25th August 1892.	On 1st October 1892, it is recorded that this man "has recently made some improvement, takes his food regularty and works in the garden, but he is still silly in his manner." In June 1893, "has made some improvement during the past six months; but still he is silly in his manner." He is said to have much improved in health. He looks strong. He is silly but no more. He admits the use of ganja daily as he wandered about with Sadhus. He denies liquor.

Hemp Drug cases admitted during 1892—contd.

Name, race, occupation, district, age, and register number of luntatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained by inquiry from Superintendent and from the Asylum registers.
7. Gulab Khan ; Musalman ; Constable ; Broach; 42, No. 8.	Ganja.	Toxic insanity.	Pretty fair.	This man was "given to indulgence in liquor and opium" (and added in pencil) "said to be smoking ganja also." This is the first attack, of 15 day's duration, sudden. The supposed cause is "moral." No hereditary predisposition. "Is violent, noisy, uses abusive language, utters constantly the name of Allah and Hazrat Pir. Is dirty in his habits, sometimes does not take his food. Tries to escape, sometimes tries to beat others, wants opium or a knife to commit suicide, passes sleepless nights, throws away his clothes and sits naked. Eyes suffused, pulse rapid. While serving at Balka he pulled out the tongue of a goat and bit it off. This act of his has led him to believe that the village people have used some charms against him.	Admitted, 24th November 1892. The pencil entry was made by the Deputy Superintendent, when the man admitted ganja. He says to us that he drank a great deal of liquor and also opium both as opium and as madak. He also smoked charas as well as ganja. He has never been excited since his admission; but he is generally incoherent and silly though sometimes rational. He has not much improved, but is not at all dirty in habits. No relatives have come to see him.
8. Raja Josa ; Hindu ; Cultivator ; Broach ; 35, No. 10.	Ganja.	Toxic insanity.	Fair.	This man was "given to indulgence in ganja and liquor." This was a second attack, sudden, and of about 6 months' duration. The first attack was in 1877. "No history of his having suffered from concussion, sunstroke or injury of the head. Supposed cause 'moral.' No hereditary predisposition. Vacant look, sleeplessness, use of abusive language, occasionally trying to beat or bite the persons going near him. Dirty habits. Meaningless muttering. Irrational answers to questions. Tries to run away. Sometimes tries to eat voraciously. Sometimes does not eat at all." Admitted, 6th December 1892.	He was never in this Ayslum before. In the case book it is recorded on his admission. "Has been quiet since admission; but he appears silly and weak-minded. Has a vacant look, occasionally muttering to himself, and does not sleep at nights." June 1893, "continues the same as stated above." He is certainly silly and scarcely of sound mind but he answers fairly rationally. He admits to both ganja and liquor.
9. Ashraf Chhitan ; Musalman ; teacher ; Broach ; 31, No. 105.	Ganja.	Toxic insanity.	Fair.	This man "smokes tobacco, sometimes ganja in excess." This is his third attack, sudden, of 8 months' duration. Preceded by "strong fever before the present attack." Supposed cause, "moral." No hereditary predisposition. "Answers questions irrationally sometimes in Guzarathi, sometimes in Urdu, sometimes in Persian. Abuses other patients. Tries to beat occasionally those who go near him. Once tried to run away. Wants pay for the number of days he has been in hospital. Wants a high post in the police department. His friends say that he was given to reading religious books and reciting hymns and singing sometimes the whole day and night." Admitted, 7th December 1892.	The Ayslum history shows that this man is generally quiet, though moody, and that he is occasionally excited and violent and even dangerous. No friends come to see him. He is intelligent. He says he has smoked ganja for seven years and has been insane for a year. He got the ganja from friends and never spent his own money on it. He drank bhang in the hot weather. He got it in the bazaar. He denies ever having used dhatura. He was never in this Asylum before. He asks for ganja still.

NOTE.—The total number of admissions in 1892 was—

Criminal	Male	... ...	1
	Female	... ...	...
Non-criminal	Males	... ...	14
	Females	... ...	4
		TOTAL ...	19

Of these the above nine cases are ascribed to hemp drugs.

3rd October 1893.

Report of the Superintendent, Ahmedabad Lunatic Asylum, on the Hemp Drug cases of 1892.

Case No. 1.—Shariz-Hamid Gul (Surat).—Letter No. 346, dated 30th March 1894, and its accompaniments, from the District Magistrate, Surat, do not furnish any additional information; hence nothing more remains to be said regarding this insane than what was stated in my letter No. 9 of 24th January 1894, *viz.* that the predisposing cause of insanity was ganja-smoking.

Note.—The statement here referred to was based solely on the following report from a chief constable :—

1. *Name.*—Shariz Hamid Gul.
2. *Caste.*—Suni, Mahomedan, Sayad.
3. *Age.*—About 34 years.
4. When did he go mad?—About six years.
5. Was he ever in his senses?—Sometimes he was and sometimes not. When he was not in his senses, he cried out loudly. At his meal times he was always in his senses.
6. Did he ever abuse?—He did not.
7. *Birthplace.*—Rander.
8. *Heir.*—His brother, Abasb in Moulvi Hamid Gul; his wife, Fatma Begum; and his daughter, Nurjah Begum, live in Rander, and his mother, Asmad Bibi, now in Mecca. His brother's, wife's, daughter's and mother's ages are 42, 27, 10, and 70 years respectively.
9. Is he married?—Yes; he has one wife.
10. Did he take any intoxicating drugs?—He did not, but he sometimes used to smoke ganja.
11. Is his madness attributed to sickness?—No, but he went mad owing to his wife's bad character and starvation, on account of constant quarrels between him and his wife.
12. Did he ever receive any injury by a fall; and if so, how and when?—No.
13. Is there any one mad related to him?—No.
14. Does he know to read and write?—Yes, he knows Gujrati.
15. *Occupation.*—He was dealing in cloth in Mauritius.
16. Did he ever get fits?—No.
17. *Character.*—Good, and he used to say his prayers.
18. Was this the first time that he went mad, or did he go mad any time before; if so, how and when?—This was the first time that he went mad.
19. Did he show any signs of madness besides this; if so, when and what sorts, and what are the reasons?—No.
20. Did he ever smoke ganja or other drugs?—He used to smoke ganja sometimes.
21. *Further particulars.*—This person used to go to Mauritius for mercantile business. He did not go to Mauritius for the last six or seven years. He appeared mad after six months from the date of his arrival at Rander. He was always in his senses at meal times. He never used to beat any one, but only used to sit like an insane person and to rave loudly. He was not given any kind of medicine for cure. He never injured any one, but if he got any money, he gave it to beggars, etc., in charity.

CHORASI; (Signed) CHHANGLAL,

2nd December 1893. *Chief Constable.*

Case No. 2.—Chhotu Singh Shibram Singh (*dementia*).—From further observation of the habits of Chotu Singh in the Asylum, I am inclined to believe that the cause of his insanity was ganja-smoking. He occasionally requests for ganja; if he was not previously habituated to the use of ganja-smoking it is not likely that he would ask for it. But on the other hand, the information forwarded by the Cantonment Magistrate, Baroda, does not corroborate this, and therefore this must be considered as a doubtful case.

Case No. 3.—Mohandass, Tulsidas (*mania*).—The District Magistrate, Kaira, reports that the history of this lunatic cannot be traced as he is a wandering mendicant.

Case No. 4.—Mahomed Bhai Haji Bhai (*mania*).—Further particulars furnished by the District Magistrate, Surat, do not confirm the previous report in the Asylum records as regards ganja-smoking having been the cause of insanity. This case of insanity is associated with epilepsy and is probably due to organic changes in the brain.

Case No. 5.—Jetha Manji (*Ahmedabad*).—The proceedings of the investigations made by the Assistant Collector at the request of the District Magistrate are enclosed. These further investigations confirm the previous report that the cause of insanity was ganja-smoking. There was apparently no hereditary taint of insanity in this case.

Case No. 6.—Ravishankar Ganpat Ram had been, except for occasional attacks of malarial fever, in good health previous to his becoming insane. He had been of a fairly cheerful disposition, and was not inclined to be quarrelsome. He was a widower, having lost his wife some nine years ago, and was unable to remarry on account of want of means. His father states that he brooded over the loss of his wife and fretted because he was unable to marry again. At the age of 20 he commenced to smoke ganja and continued in the habit till he became insane, consuming one chillum two or three times a day. Both his parents state that he was not in the habit of using spirits, opium, or tobacco. They also say that none of their relations suffered from insanity or any nervous disorder. Both of them are healthy.

Case No. 7.—Gulab Khan Rehemu.—Family history is not obtainable, as nothing is known of him before serving in the Broach police. He has a nephew said to reside at Jambusar, but I have been unable to obtain his attendance. He is said to be healthy. Gulab Khan was in the habit of drinking spirits frequently to excess, eating opium, and drinking kusumba, and smoking ganja. It seems also from the evidence that he associated with prostitutes in a promiscuous manner. He was a widower. A constable who lived with him in the same chowki for nine months states that he did not smoke ganja every day.

Case No. 8.—Raja Josa, who lived with his only surviving brother, commenced the habit of smoking ganja at the age of 16, two or three chillums a day. His brother, who gives evidence, also smokes ganja to about the same extent and commenced at about the same age. Neither of them indulged in any other intoxicant. Both were married and both divorced their wives. Raja's health before becoming insane was good. He was good-tempered. None of his family suffered from insanity, convulsions, or epilepsy. The brother stammers.

Case No. 9.—Ashraf Chhitan.—Had been in good health before becoming insane. He was of a cheerful disposition, good-tempered, and fond of his family. He never indulged in ganja, spirits, opium, or even tobacco. For two or three years before his becoming insane he was in the habit of reading the Koran night and day, and during this time he slept very little—only one or two hours at night. None of his relations, according to the statement of his wife and stepmother, who are the only surviving members of his family capable of giving information, suffered from any brain disease.

RATNAGIRI LUNATIC ASYLUM (BOMBAY).

(SUPERINTENDENT, DR. JENNINGS.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
1. Sidram bin Rama; Hindu; Beggar; Belgaum; 30, No. 142.	Ganja...	Toxic insanity.	Good...	Form C shows that this man is "said to have been addicted to ganja smoking and drinking." He suffers from "mania" of "about ten years' duration." It was preceded by "Fever of four months' duration." The cause is "unknown." History of concussion, sunstroke or injury to the head cannot be traced." No heredity and no epilepsy. Form A (medical certificate) mentions "constant muttering to himself, answers questions incoherently, sometimes restless, occassionally violent, throws stones at passers-by. Is dirty in his person and habits. Wanders about the streets without any settled place of abode. His mother states that he has been insane for about ten years.' Admitted 1st March 1892.	The Hospital Assistant entered the word "ganja" under "cause" (with mark of interrogation) because the use of ganja was admitted. There has been as far as the case book shows "no improvement" in this case. The man is sad and melancholic in appearance with puckered forehead and shifty expression.
2. Gobind Wasadeo Paik; Brahman; Shopkeeper; Karwar; 32, No. 146.	Ganja...	Toxic insanity.	Fair ...	Form C shows that the man was "addicted to smoking ganja to a great extent." He had suffered from "mania" for "two months," which was alleged to be "due to smoking ganja to a great extent." No hereditary predisposition and no epilepsy. Form A shows "noisy, quarrelsome, tears his clothes, does not sleep well at nights, filthy in his habits." Admitted, 27th March 1892. Discharged cured, 30th October 1893.	This man was "dirty and destructive and required separate confinement, incoherent and disconnected in his talk" on 14th July 1892. There seems to have been no change until 10th February 1893, when he "seems rapidly improving and speaks coherently and rationally." On 27th July 1893 he "is free from signs of insanity and is fit to be discharged. He will be observed for one or two months further."
3. Dinkar Gopal Saul; Brahman; Cultivator; Ratnagiri; 22, No. 148.	Ganja...	Toxic insanity.	Good...	Form C shows that this man's relatives all live in Kapre. He has been "addicted to the use of tobacco these two years and to that of ganja these six months, since which time he is insane." The duration of the attack is put down as "about six months." It was "sudden." It is ascribed to the "use of ganja." There is no heredity and no epilepsy. Form A records, "Has delusions. Imagines he has seen persons who have died long ago. Is not dirty nor dangerous to himself or others, but is desirous of obtaining treatment for his mental condition. Said by the Police Patel of his village to be abusive and destructive." Admitted, 4th April 1892.	The first entry in the Case Book is on 15th July 1892. "Since his admission he has been quiet and well conducted. He is coherent and rational in his conversation. Gives no trouble. Occasionally reserved in his manner and habits." January 11th, 1893, "is improving but occasionally gets excited. Has frequent seminal emissions at night. 27th July 1893 answers rationally. Occasionally gets excited. Emissions much less frequent." 13th December 1893 "has improved much. Does not complain of frequent emissions." This man has naturally a somewhat imbecile appearance.

Hemp Drug cases admitted in 1892—contd.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (tatement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
4. Nanachandra Dudhan; Maratha; Labourer; Thana; 48, No. 154.	Ganja...	Toxic insanity.	...	Form C shows that the man is "intemperate, given to smoking ganja," and that the cause is "probably ganja smoking." Otherwise there is nothing known about the history of the case. The Thana authorities think that "he appears to be from Satara." Form A records, "he is violent, dangerous, abusive. Went to the Session Judge's house some days ago and said he wanted to murder the Judge. Has delusions. Is dirty in his habits, incoherent in speech, sleepless, refuses food, cries and laughs without reason. Is unmanageable. Sent by the Chief Constable, Salsette, for being a public nuisance. Admitted, 25th April 1892. Discharged cured, 13th April 1893.	The entry of cause is merely "ganja" in the case-book. He was admitted on 25th April, and the first entry is 19th July 1892. "Is recovering from the effects of the toxic agent, which caused his insanity. Talks fairly coherently. Is not dirty nor troublesome; works well and is inoffensive." September 5th, 1892: "Is now quite rational; but on account of the cause of his insanity is retained for further observation." He remained sane, and was discharged on 14th April 1893.
5. Rama Pillai Shindu; Maratha; Cultivator; Ratnagiri; 30, No. 159.	Ganja..	Toxic insanity.	...	Form C is in Marathi. It states that "he takes liquor when he can get it. He takes toddy. He also takes bhang and ganja." It is his first attack and occurred "three months ago." It came slowly. It was preceded by fever, "in the cold stage of which his belly and legs swelled." Then under entry No. 12 regarding cause, we have "he was ill and having become exposed to the sun he became insane; this was the cause." No heredity and no epilepsy. Form A records "He is disconnected in speech. His attention wanders. He imagines he is too ill to work, and has supported himself by begging. Is restless at night. Inclined to wander and talk to himself a good deal." He is reported mischievous and troublesome. Admitted, 3rd September 1892. Discharged cured, 24th September 1893.	The cause "Ganja and drink" is filled in by Dr. McCalman's own hand. The Hospital Assistant says that it was when the lunatic was admitted on the statement of friends and police. On 24th February 1893 "slight improvement in mental condition. Is quicker; works willingly and is cleanly in habits." 27th July 1893, "much improved. Answers rationally; works regularly; is cleanly."

The register of lunatics is written up by the Hospital Assistant Ramchandar Ganpat Rao. It is written at the time that the patient is received in the Asylum. All the information regarding the facts and history of the case previous to admission and also date of admission are filled up by him at the time of the patient's admission. All the entries prior to the date of admission are copied from the papers received with the patient. It is a purely clerical piece of work, and would not (the Superintendent says) be checked in any way. The entry of "alleged cause" is always made at that time; and the present Superintendent says he has never had occasion to alter the cause subsequently to the patient's admission. If two causes were mentioned in the papers the general rule is to enter only one, the Hospital Assistant says; but occasionally the second cause is entered within brackets. If the papers showed "probably ganja," only the word "Ganja" would be entered in the register.

In the case of Sidram bin Rama (No. 142) the papers show cause 'unknown,' but the Hospital Assistant says he entered 'ganja' because the use of ganja as well as liquor was suggested in the papers under the entry about 'character.'

In the case of Nanachandra Dudhan (No. 154), the papers show 'probably ganja smoking' in the cause entry; and the register shows 'ganja.'

In the case of Rama Pillai Shindu (No. 159), the entry under cause in the papers (in Marathi) is "he was ill, and having become exposed to the sun became insane." In the register it is 'ganja.' In the case book Dr. McCalman (then Superintendent) had entered 'ganja and drink' in his own handwriting. The Hospital Assistant says that this was done at the time of admission as the brother, who accompanied the patient, said he had taken the drugs. Dr. McCalman was the Civil Surgeon who had the man under examination also as this was a Ratnagiri case.

It may be useful to record that in the case of Ramchandra Krishnashet (No. 140), there is no entry in the papers as to cause, but there is an entry under character that the man is "addicted to the use of liquor and ganja." The Hospital Assistant says he entered 'spirits (and ganja)' as the cause, "because the entry of cause had been made in the wrong place, and people who knew the man said he took liquor and ganja."

This register prepared as above is, the Hospital Assistant says, the only source from which the entries as to cause in statement VII of the annual returns are taken.

The case book is also written up at the same time; and all the entries (except those from Form A) contained in the papers received with the Magistrate's order are made at that time as a rule, wholly by the Hospital Assistant in the case book the same day or the morning after (if the man is received in the afternoon). Only in cases where the Hospital Assistant has doubt are any blanks left for the Superintendent to fill up. In the case of Rama Pillai Shindu referred to above, Dr. McCalman saw the patient's brother. The Hospital Assistant says he had copied all the entries except the two as to 'Cause' and 'Form of insanity.' These are found alone to be in Dr. McCalman's handwriting. The Hospital Assistant does not think that he read the vernacular papers to Dr. McCalman, but told him that the brother said the man had used ganja and drink; and Dr. McCalman asked the brother and then made the entry. The Hospital Assistant says he did not draw Dr. McCalman's attention to the vernacular entry of cause, because he himself thought it a less reasonable explanation of the insanity than 'ganja and liquor'; and also because he did not know whether Dr. McCalman might not have seen the entry when the man was under observation in the Civil Hospital.

If the cause is given clearly in the Magistrate's papers (*e.g.*, 'ganja'), the Hospital Assistant says he would never keep the friends for the Superintendent to see. He would send them away. Neither would he keep them if the cause were shown as 'ganja and drink,' nor ganja with any other cause.

The total admissions for 1892 were—

			No.
Criminal	Males	...	4
	Females	...	2
Non-criminal	Males	...	15
	Females	...	5
	TOTAL	...	26

Of these, the five shown above were attributed to hemp drugs.

22nd December 1893.

Report of Surgeon-Major Lyons, Superintendent, Ratnagiri Lunatic Asylum, on the Hemp Drug cases of 1892.

Name.	Cause of insanity from recent inquiry.
1. Sidram bin Rama ...	The Civil Surgeon, Belgaum, states that he smoked ganja for many years.
2. Gobind Wasadeo ...	The Civil Surgeon, Karwar, states that the cause was ganja.
3. Dinkar Gopal ...	Lunatic's uncle, Jairam Bhikaji, states that he does not know the cause of insanity of his nephew. The 1st class Magistrate, Ratnagiri, states that the information given in Form C may be presumed to be correct.
4. Nanachandra Dudhan ...	The Civil Surgeon, Thana, states that the case was clearly the result of ganja smoking.
5. Rama Pillai ...	Lunatic's relatives do not give the cause of insanity. The cause given by the Civil Surgeon and Superintendent of the Asylum should be taken.

The 1st May 1894.

DHARWAR LUNATIC ASYLUM (BOMBAY).

(SUPERINTENDENT, DR. MCCALMAN.)

One Hemp Drug case admitted in 1892.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
Dariappa; Hindu; Cultivator; Bijapur; 25.	Smoking ganja.	Mania ...	Good...	This man was arrested for damaging telegraph posts. Form C under "character" says "Temperate. Previous to this illness he took to ganja smoking." He has suffered from "Mania" for three months. The attack was "insidious. Mutters to himself, uses bad language to everyone who comes near. Sometimes violent, dirty in the habit. Gradually becomes worse." The supposed cause is "smoking to excess tobacco and ganja and to some extent drinking. No hereditary predisposition. The medical certificate (dated 30th October 1892) shows that he is very violent and has destroyed some of the bolts and fastenings of his cell. He is very dirty in his habits, speaks incoherently, very noisy and has tried to attack his guard, mutters to himself and is abusive when spoken to." In a "history" of the lunatic, drawn up by the Deputy Collector and forwarded by the Magistrate on 25th January 1893, the above facts are recapitulated; but under "character," it is written "Intemperate. Smokes ganja and bhang, drinks country liquor and sindi (toddy) to intoxication, is not however an habitual offender." Admitted, 11th November 1892.	The Asylum registers show that on admission "he is dirty and extremely destructive. He has pulled down the masonry moorah of his cell and with the stones threatened to attack the warders. He will not wear any clothing, gives a great deal of trouble and is very abusive. Takes his food well; is noisy, singing, laughing." 7th December—"Very much quieter." 17th January 1893—"His improvement continues. He remains quiet and gives no trouble. Is now cleanly and answers coherently, but is dull and apathetic." 8th May 1893—"Completely recovered. States he has no recollection of the circumstances connected with his being sent to the Asylum or of his coming here." 27th June 1893—Sent to stand trial. The Superintendent is of opinion that this was a ganja case. The quick improvement is one clear sign of that. The ganja history mainly determines the "Toxic" character of the insanity.

NOTE.—The total number of admissions in 1892 was—

Criminal	Male	...	1
	Females	...	...
Non-criminal	Males	...	6
	Females	...	...
	TOTAL	...	7

Of these, only the case shown above is ascribed to hemp drugs in statement VII.

Report received through the Superintendent, Dharwar Asylum, on the Hemp Drug case of 1892.

RETURNED to the District Magistrate, with a statement of one Laxumi, mother of lunatic Dariappa, in original as required. The wife of Dariappa was present, but she could not give any information on the points required to be cleared, and consequently her statement was not taken down.

Evidence by Laxumi.

MY name is Laxumi. My husband's name is Shidda. My age is about 45 years. My caste is Uppur. I reside at Mhasali, Taluka Indi of Bijapur District. I support myself on manual labour.

I am mother of the lunatic Dariappa bin Shidappa. He is my only son. I have got a daughter, who is married and who now lives with her husband. My husband died in or about 1876. My husband died a natural death. He was not addicated to "ganja." He never took any intoxicant—neither "ganja," nor liquor nor opium. I never used any of these things. I had given some "ganja" to my son Dariappa as a medicine while he was six months old. I washed a little of "ganja" in milk and gave the milk to him two or three times. Ever since no "ganja" or any other hemp drug was either given by me to him as medicine or taken by Dariappa for medicinal purposes. I did not see my son smoke "ganja" ever. If he had ever done so I did not come to know of it. He may or he may not have taken "ganja" smoke previous to his being insane. He was given "ganja" smoke by one of his friends once or twice about a couple of months previous to his becoming insane, but when I came to know of it I gave him a beating, and consequently he left smoking since that day. He did not again take to "ganja" smoking. I cannot state how he then became insane. Dariappa worked as a labourer in my village. He sometimes drove carts. "Ganja" is sold at the village Tamba, which is about six miles from my village. When I gave a beating to Dariappa I had learnt that he was smoking "ganja" and not drinking "bhang."

BIJAPUR;

The 18th December 1893.

A. R. CHITRE,
Magistrate.
C. T. PETERS, M.D.,
Brigade-Surgeon-Lieutenant-Colonel,
Civil Surgeon, Bijapur.

LUNATIC ASYLUM, HYDERABAD (SIND).

(SUPERINTENDENT, DR. KEITH.)

Hemp Drug Cases admitted during 1892.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
1. Mulchand Waliram; Hindu; Nil; Hyderabad; 30—849.	Bhang	Toxic insanity.	.....	The medical officer shews the supposed cause to be bhang and the duration of the attack three months. There is no history of epilepsy or heredity. "He seems under the influence of some narcotic and talks nonsense. He says his father's name is Angrez." His people and the police say he is dangerous to himself and others. Admitted, 4th February 1892.	6th February 1892. "He talks nonsense and laughs without cause. A few questions he answers rationally and then lapses into incoherence. When alone he mutters to himself." He is "just the same" up to 1st September 1893. On 1st October 1893, "he is still unsteady in the replies to questions put to him; but he is much improved. He wants hair oil for his head; tobacco, opium and bhang to drink. During the examination he got rather excited, but did not become violent." The register shows the type as "mania." Toxic insanity, the Superintendent says, is diagnosed from the cause, not from the symtoms. There are no special symptoms of toxic insanity.
2. Lachhman Walji; Hindu; Fakir; Katiawar; 30—851.	Bhang	Toxic insanity.	...	The medical officer shows that the attack had lasted about a month and was ascribed to bhang. The man is not epileptic or suicidal, but is dangerous to others. His family history is unknown. "He talks quite rationally but seems foolish from bhang drinking, in which he confesses to have indulged without stint. He was in the habit, according to the police, of wandering into people's houses and considering them his own property and ordering the owners about. Was also in the habit of throwing stones at people in the bazar." Admitted, 8th April 1892.	On his admission, after recounting several senseless remarks of the patient, the Superintendent says "he is much worse than he was before his admission into the Asylum." There is no change for months. On 1st July 1893, "he mutters to himself and talks all nonsense, is dirty in his habits, does not take care of his clothes." There seems to be no improvement. On 1st October 1893 it is stated:—"He has a peculiar way of staring sometimes, and during the day he continually wags his right hand like a fan before his face." The type is entered as "Toxic Insanity—mania."
3 Parto, Mussalman; Fakir; Hyderabad; 30—858.	Bhang	Toxic insanity.	...	The papers in this case were returned to the District Magistrate with letter No. 108, dated 13th July 1892, after the man's death.	The Asylum papers show the type as "Dementia," and ascribe the insanity to "bhang, ganja, charas and spirit drinking. He was in Jail under Dr. Keith's observation. He certified that the man was insane and unable to make his defence (on a charge of theft). "He was insane then and not able to answer questions rationally, but during the time he was in Jail he got much better and is still improving, but he still mutters to himself when no one is talking to him." On 1st July 1892, "he is suffering from acute dysentery. Before his admission into the Asylum, he was for a long time suffering from enlargement of spleen and liver." He died on 12th July 1892: there was no *post-mortem* examination.

Hemp Drug cases admitted during 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
4. Hiramon, Hindu; Mendicant (Ghosain); Cawnpore; 40—859.	Ganja smoking.	Toxic insanity.	...	The papers show that it is not known whether this is a first attack. It is ascribed to "use of *Cannabis indica* and religious fanaticism." There is no history of epilepsy; it is doubtful whether the man is dangerous to others; he is not suicidal; his family history is unknown. "He is noisy, incoherent in speech, very talkative to himself, excitable, dirty, and indecent; tears his clothes; sleeps irregularly." Admitted, 4th June 1892.	On 27th June 1892, he "is very noisy, talks almost continuously night and day, and always incoherently. He answers a few questions correctly at the beginning, but rapidly becomes incoherent. He wanders about, never at rest night nor day, is dirty in his habits, goes into the bath, has a bath, and then comes out and rolls in the compound of the fort." There is "no change" until 1st April 1893, when "he is now quiet and answers a few questions rationally and others incoherently. He keeps himself clean, wears a langoti, but does not keep clothes on." He continues to improve steadily until on 1st August 1893, he is said to be "almost quite sane." The visitors directed that he should be detained for another month. They passed the same order on 1st September 1893, and on 10th September he had "a relapse, talks nonsense, walks about naked, is very abusive and filthy in his habits." He is still in this state. Dr. Keith thinks that the injury to the brain becomes permanent at a certain age after a long course of the drug. So this relapse is not contrary to the ganja theory of the case. The type is shown as mania in the register.
5. Soba, Hindu; Mendicant; Kurrachee; 24—860.	Ganja smoking.	Toxic insanity.	...	The papers show the supposed cause as "Cannabis Indica." It is not known whether this is the first attack. The man is not suicidal, but is dangerous to others. He is not epileptic. His family history is unknown. "He is sullen, morose and silent, but liable to fits of excitement. Is extremely dirty in his habits and exposes his person. He tears his clothes." Admitted, 4th June 1892.	On admission, "he wanders about and talks incoherently to himself." On 2nd August 1892, he "is quiet in his habits and harmless, does not take care of his clothes, mutters to himself, and does no work, talks incoherently." There is no change until 1st October 1893, when, after recording some incoherent remarks of the patient's, the Superintendent says:—"He has no idea of time nor space, but he is a good deal improved; for he now understands and speaks the Hindustani language, while formerly no one could understand a word he said." He says now that he comes from Madanpur. He says he smoked ganja and explains how it is prepared and smoked.
6. Metho; Hindu; Fruit-seller; Kurrachee; 25—862.	Ganja smoking.	Toxic insanity.	...	This is not the first attack. He was formerly treated in the Hyderabad Lunatic Asylum. He has been ill about one month. The supposed cause is "Indian hemp." He is not suicidal or dangerous to others; not epileptic. Family history unknown. "He is sullen and morose in his manner and dirty in his habits." He is also destructive and averse to answering questions. Admitted, 26th June 1892.	The old record shows that on 12th September 1890, "he answers short questions rationally, but in long answers he relapses into incoherence; is quiet in his habits. When alone, he mutters to himself; does little work at the Persian wheel." There is no improvement until 12th September 1891, when "he works well in the garden, and behaves rationally, keeps himself clean, but mutters to himself when alone." He goes on improving until 14th November 1891, when he appears "to be sane."

Hemp Drug cases admitted during 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
Metho—*contd.*	Ganja smoking.	Toxic insanity.	...		He is discharged on 1st February 1892. In the present case, he is admitted on 26th June 1892. On 27th June:—"He is very slow in answering questions, and then he gives incorrect answers to them. He sits all day in one place and never speaks unless he is spoken to. He is clean in his habits." His state is little changed, but he is "gradually improving," though he is not yet "cured." He denies now the use of ganja. He knows how it is prepared, but denies the use. He pleads in a quiet sensible way to be relased.
7. Dholu; Hindu; Munshi; Kurrachee; 20—870.	Bhang.	Toxic insanity.	...	The papers show the duration of this attack as about four months, and the supposed cause as "financial difficulties." The man is not epileptic, not suicidal, but dangerous to others. No history of heredity. "He behaves exactly as if he were under the influence of some narcotic, continually talks incoherent nonsense." Admitted, 20th August 1892.	20th August 1892. "Talks incoherently, is very noisy, abuses everyone, tears his clothes, runs about naked, signs and laughs, without cause, and in a moment cries without reason." 4th September 1892, "he is quiet and talks rationally to a certain extent, does little work of sweeping the wards and carrying water, &c." 15th October 1892—"Improving in every respect." Discharged, 5th November. Dr. Keith says that the diagnosis of toxic insanity is based on the statement that this man acted "as if he were under the influence of a narcotic." He behaved similarly in the Asylum. He also admitted the use of bhang, and his father said he took it. "Financial difficulties" might lead to excess in bhang here, as they might lead to excess in liquor in other countries.
8. Matadin; Hindu; Labourer; Lucknow; 25—871.	Ganja.	Toxic insanity.	...	It is unknown whether this is the first attack, or how long it has lasted. The supposed cause is bhang. It is not known whether the man is epileptic. He is not suicidal but dangerous to others. There is no heredity. "He gives incoherent answers to questions and talks nonsense. He was brought up by the police as dangerous to other people, gets angry and throws stones at them." Admitted, 21st August 1892.	On admission "he talks loudly and incoherently; he is very quarrelsome, abusive, talks continually to himself, tears his clothes, and is dirty in his habits, does no work." There is no change till 1st December 1892, when "he is now quiet, takes care of his clothes, keeps himself clean, does some work in the garden". He goes on improving until 4th March 1893, when "he seems quite well for the last month" and is discharged cured. The type is shown as "mania."
9. Shikro; Musalman; Salt maker; Hyderabad; 35—875.	Bhang	Toxic insanity.	...	This is a second attack. The first was about five years before, when he "got well at home." The present attack has lasted about two years. The police say that the man is epileptic. He is suicidal and dangerous to others. There is no heredity. He does not answer questions put to him rationally, struggles as if he were drunk, and talks incoherently." Admitted, 13th September 1892.	"Since his admission yesterday he has been running about all over the place, throws dust and stones at other lunatics." There is no change till 1st February 1893, when "he is now quiet and gives answers rationally, takes care of his clothes, keeps himself clean." He continued to improve till 10th March 1893, when he was handed over to the care of his relations "improved." The type is shown as "mania."

Hemp Drug cases admitted during 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
10. Baxali; Musalman; Blacksmith; Hyderabad; 25—874.	Bhang.	Toxic insanity.	...	This is the first attack, duration unknown. The supposed cause is bhang. The man is not epileptic; he is suicidal and dangerous to others. There is no heredity. He "will not answer questions put to him and talks incoherently. Seems under the influence of some narcotic. Twists his mouth and turns up his eyes and cries without reason." Admitted, 13th September 1892.	On admission, he "talks incoherently and incessantly, laughs without reason, mutters to himself when alone, keeps himself naked, is abusive and quarrelsome." 1st November 1892—"Talks rationally to a certain extent, keeps himself clean, is quiet, and does some work." He continued to improve until 4th January 1893, when he was discharged "cured." The type is shown as "mania."
11. Sevo; Hindu; Mason; Hyderabad; 40—877.	Charas.	Toxic insanity.	...	This is the first attack and of four days' duration. The supposed cause is "narcotics" The man is not epileptic. He is suicidal and dangerous to others. There is no heredity. "He is addicted to drinking, smoking charas, and eating opium; and his symptoms show poisoning of the brain by narcotics. Unable to answer questions. Incoherence. He is brought by the police as he is sometimes dangerous to himself and to others." Admitted, 25th September 1892.	On admission "he is very abusive and quarrelsome, talks incoherently, goes about naked." On 10th October, "he is quiet, works a little at the Persian wheel and takes care of his clothes." On 1st December 1892:—"Is slow in answering questions, sits in one place in a melancholy state, sometimes refuses food, does no work." On 9th January 1893, he was handed over to the care of his relations though not improved. The type is shown as "mania." Dr. Keith says the relatives told him of the use of all the drugs named by this man. Charas is mentioned as the cause because it is worse than bhang.
12. Gulazim; Pathan; Labourer; Yagistan; 30—881.	Charas.	Toxic insanity.	...	This man was convicted on 4th July 1892 of robbery, with violence, and sentenced to one year's rigorous imprisonment. While in Jail at Shikarpur he developed symptoms of insanity about 1st August 1892. The supposed cause is shown as "used to indulge in charas and bhang before." He is not suicidal but "dangerous when told to work." His family history is not known. He "has a wild look, refuses work, and comes to fight when told to work. He is otherwise quiet and morose. His habits are filthy. He covers up his body with dust, was observed to make a big hole in the cell wall with his hands. Once tore his blanket into pieces. Sits naked. Passes water in his clothes. Once was observed to throw vegetables in other cells. He sits quiet the whole day, and when asked as to why he applies dust to his body, refuses to reply." Admitted, 9th November 1892.	On admission he "sits quiet and morose, filthy in his habits, tears his clothes, does not speak with anyone." Continues much the same; but on the 16th June 1893 he is said to be "almost an imbecile." There is no change until 1st October 1893, when it is recorded that "he has no idea of space or time; is easily excited and gets violent, but is much improved." The type is shown as "mania."

Hemp Drug cases admitted During 1892—contd.

Name, race, occupation, district, age, and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
13. Dulsingar Singh; Hindu; Fakir; "Hindustan;" 45—888.	Ganja smoking.	Toxic insanity.	...	It is not known whether this is the first attack or how long it has lasted. The supposed cause is "unknown." The man is not epileptic, not suicidal, but dangerous to others. Heredity unknown. "He is strange and inconsequent in his talk. States as facts things which never occured, without apparent object, and denies all knowledge of others; bitter in expression. Nervous movements of hands, pulling about and playing with objects." Admitted, 26th December 1892.	On admission, he "talks incoherently, and incessantly mutters and talks with imaginary objects. He does not take care of his clothes, goes about naked. Filthy in his habits." There was no change. On 16th May 1893, he "has been suffering from diarrhœa, for which he would not take medicine, and sometimes refuses food." He became weak and emaciated and died on 20th May. There was no *post-mortem* examination.

NOTES.—(1) The total number of admissions in 1892 was—

Criminal	Males		6
	Females		0
Non-criminal	Males		31
	Females		3
	TOTAL ...		40

Of these the above 13 are attributed to hemp drugs in Statement VII and shown under "toxic insanity" in Statement VI.

(2) Most of the case book entries are made by Dr. Keith, who has been five years in charge of the Asylum. The Hospital Assistant, Samuel David, has been in charge for four years.

(3) There are to-day in this Asylum thirty-five persons whose insanity is ascribed to hemp drugs. These are—

Fakirs or mendicants	23
Labourers	6
Cultivator	1
Sowar	1
Servants	2
Shopkeepers	2

The large number of fakirs is noteworthy.

The 17th October 1893.

Final Report of Brigade-Surgeon-Lieutenant-Colonel Keith, Superintendent, Lunatic Asylum, Hyderabad (Sind), on the Hemp Drug cases of 1892 (submitted on 4th February 1894).

I have the honour to forward herewith the reports on previous histories of patients admitted in 1892, and to request you to be good enough to substitute them for the previous ones, as I am not pleased with them.

No. 1. MULCHAND WALIRAM—HINDU.

There is no history of heredity. His father gives a history of sunstroke when he was in Bombay. This might have been the predisposing cause, and the use of bhang afterwards proving the exciting cause. There is only the father's statement that he had sunstroke at Bombay; there is no medical evidence. But that he indulged freely in the use of hemp drugs is shown by the history as recorded by the Magistrate and Civil Surgeon; and there being direct proof of his indulging freely in hemp drugs, and as he confesses himself that he indulged freely in their use, is always asking for them, and ready to indulge in them, his case is classified as toxic insanity (mania).

No. 2. LACHHMAN WALJI—HINDU.

There is no further history obtainable in this case. The man has no relations in Hyderabad. He is a mendicant and came from Katiawar; but he cannot give the address of any relation from whom his previous history can be obtained; but he confesses to the habitual use of hemp drugs, knows how to prepare them, and is ready to indulge in them without stint; his case is classified therefore as toxic insanity (mania).

No. 3. PARTO—MUSULMAN FAKIR.

This man was a mendicant about whom no previous history could be obtained. He came from Marwar. During his residence in the Asylum he was continually asking for hemp drugs or opium, knew how bhang, ganja and charas were prepared, and was ready to indulge to any extent if given these drugs. His type was classified as toxic insanity (dementia).

No. 4. HIRAMON—HINDU FAKIR.

There is no further history obtainable in this case. He was a mendicant, and these mendicants, as a rule, freely indulge in hemp drugs; and as in the Asylum he is always asking for them, knows how to prepare bhang, ganja and charas, and is ready to indulge in them to intoxication, his case is classified as toxic insanity (mania).

No. 5. SOBA—HINDU.

There is no further history obtainable in this case. He was also before his admission into the Asylum a mendicant; and as he is continually asking for hemp drugs, knows how to prepare bhang, ganja and charas, and is ready to indulge to intoxication in their use, the inference is that his insanity is of a toxic nature (toxic insanity, dementia).

No. 6. METHO DETORAM—HINDU.

The history given before the Magistrate and Civil Surgeon shows that Metho was not addicted to the use of hemp drugs, and that it was not hereditary. He himself at first denied the use of them, but at the same time he knew how bhang, ganja and charas were prepared, and was always ready to indulge in them to intoxication; and he now confesses the use of hemp drugs to excess. The diagnosis and classification would appear therefore to be correct, hemp drugs forming the exciting cause of the insanity. The Asylum history of his case also shows it to be temporary and re-induced by the use of the drug (melancholia).

No. 7. DHOLU *walad* JETHMAL—HINDU.

In the history given before the Magistrate and Civil Surgeon of Karachi the father and friend deny that Dholu indulged in hemp drugs. His father, when he brought him to the Asylum, and when he took him away, said that his son indulged in bhang, but the extent of indulgence was not ascertained. In the Asylum he was continually asking for hemp drugs, and was always ready to indulge to intoxication if hemp drugs were offered to him ; and he knew how to prepare bhang, ganja and charas. The classification would therefore seem the correct one, *viz.*, toxic insanity (mania).

No. 8. MATADIN—HINDU.

The previous history shows that hemp drugs were the exciting cause of Matadin's insanity, and that it was temporary, as he is now employed in a garden close to the asylum, is doing well, and has given over the use of hemp drugs. He confessed all along to the use of the drug, and attributed his insanity to its use. His case was therefore one of toxic insanity (mania).

No. 9. SHIKRO FAKIR—MUSULMAN.

The history taken before the Magistrate and Civil Surgeon shows that he was in the habit of taking bhang from his infancy, and that there was no heredity. In the Asylum he was continually asking for it, and ready to indulge to intoxication. The classification toxic insanity would therefore appear to be the correct one, and that hemp drugs were the exciting cause (type mania).

No. 10. BAXALI—MUSULMAN.

The history taken before the Magistrate and Civil Surgeon shows that Baxali indulged in bhang, ganja and charas, and that his insanity was not hereditary. He is now quite well, and testifies that he was formerly in the habit of taking bhang and smoking charas every day, and that charas smoking was the cause of his insanity. His case was therefore classified as toxic insanity (mania).

No. 11. SEVO—HINDU.

The history taken before the Magistrate and Civil Surgeon shows that Sevo indulged in bhang, ganja and charas, chandu-smoking and opium-eating. When in the Asylum he often asked for the drugs, knew how to prepare bhang, ganja and charas, and was ready to indulge to intoxication. His case was therefore classified as toxic insanity (mania).

No. 12. GULAZIM—PATHAN.

No previous history can be obtained except that the prisoners in the Shikarpur Jail said that he was a charas-smoker. He now confesses to its excessive use, is always asking for it, and is ready to indulge to intoxication. The diagnosis recorded, *viz.*, toxic insanity, seems therefore correct (mania).

No. 13. DULSINGAR SINGH—HINDU.

He was a wandering mendicant, and no previous history was obtainable. In the Asylum he was constantly asking for hemp drugs and opium, and ready to indulge at any moment to the degree of intoxication. The inference is that the diagnosis of toxic insanity was the correct one (type mania).

J. F. KEITH, *Brigade-Surg.-Lieut-Col.*,
Superintendent, Lunatic Asylum, Hyderabad.

First Report of the Superintendent, Lunatic Asylum, Hyderabad (Sind), on the Hemp Drug cases of 1892 (submitted on 1st December 1893).

CASE NO. 1 OF MULCHAND.

I state that my name is Waliram, my father's name Sangatram, my age about 55 years, my religion Hindu, my caste Lohano, my calling Hawker, my residence Hyderabad town.

Mulchand (in Asylum register the name is put down as Bulchand), who is now in the Asylum for the last two years, is my son. I have five sons besides Mulchand. One of them is dead. So two are employed and two are in school. None of them is addicted to narcotics; so far as I remember none in our family has become insane. My father used to drink *bhang* every evening at a Dharamsala in a moderate quantity. I drink *bhang*, but occasionally, when I go out in the Bazar. I take a small quantity of *bhang* as a cooling stuff. My son, who is now in the Asylum, went to Bombay ten years ago and got mad. The insanity continued for nearly six months. I don't know what was the cause, but he himself told me that he used to go out in the sun to sell cloth and his head was affected by intense heat. Before he went to Bombay, he did not drink *bhang* or smoke *charas* or *ganja*. He was brought to Hyderabad and was all right for about five years; then all of a sudden he complained of pain in his head, and became insane. So far as I know he never took narcotics; but he might have done so in my absence. He was confined in the Asylum for six months and then discharged as all right. He fell in bad company, and commenced drinking *bhang* daily and smoking *charas* and *ganja* at Kali on every Tuesday for nearly five years (Temple of Goddess near Hyderabad town). I don't know what quantity of narcotics he indulged in, because he never used these things in my presence. He became gradually insane, and he was getting troublesome; he was confined in the Asylum. So far as I knew he was not dangerous to society, nor did he beat any one. He, however, used to beat me and his mother sometimes when excited. This is the third time that he has become insane in his lifetime. The insanity appears to be due to constant use of narcotics, such as *bhang*, *ganja* and *charas*. It is not hereditary. I had two brothers. They never indulged in *bhang*, etc.

J. KEITH,

Civil Surgeon, Hyderabad

THATTUMAL,

The 22nd November 1893. *Magistrate, Second Class.*

NOTE.

The result of the local inquiry made in the neighbourhood of the lunatic is that he was always seen smoking *ganja* and *charas* and drinking *bhang* for the last ten or twelve years. The insanity is ascribed to use of narcotics. It is self-acquired and not hereditary. He was not epileptic, but was dangerous to society. He talked nonsense and spoke incoherently. He has become insane on three occasions. There was and is no insane person in his family. His grandfather drank a small quantity of *bhang*. His father also drinks *bhang* in a small quantity. No *ganja* or *charas* has been used by any of his family members except the lunatic.

J. KEITH,

Civil Surgeon, Hyderabad.

THATTUMAL,

The 22nd November 1893. *Magistrate, Second Class.*

CASE NO. 2.—LACHHMAO

No history can be obtained as he is unable to say where his relations live.

J. KEITH.

CASE NO. 3.—PARTO.

This man died in the Asylum. He was a native of Marwar, a mendicant with no known relations or friends in Hyderabad.

J. KEITH.

CASES NOS. 4 AND 5.—HIRAMON AND SOBA.

These men were wandering mendicants and have no friends or relatives in Karachi. The police have also made searching inquiry but to no purpose.

G. BAINBRIDGE, *Civil Surgeon, Karachi,*

(*Illegible*) *First Class Magistrate, Karachi.*

CASE OF METHO, SON OF DETARAM, NO. 6.

Statement of Oodernomal, son of Detaram, aged 29 years, Hindu Lohana, servant, residing at Karachi.

1. Do you know Metho Detaram who is now an inmate in the Lunatic Asylum at Hyderabad?

1. Yes, I know him; he is my younger brother.

2. How many times has he been in the Asylum?

2. This is his second time. He was first sent to the Asylum some three years ago, when he was kept there for seven or eight months; he was then declared to be well and released. He remained well for three months after he came out of the Asylum and then again became insane. He was again sent to the hospital (Asylum) 16 months ago.

3. At what age he first showed symptoms of insanity?

3. He was about 18 years old when he first became insane, and he is now 21.

4. Did he follow any occupation at the time he became insane, and what symptoms of insanity did he show?

4. He was employed as a servant in the shop of one Chello Mulchand, who has a coffee shop at the Ghizri Sanitarium. He was employed by Chello for three or three and a half years, and suddenly left his service and came to live in my house; there he showed symptoms of insanity. Was very abusive; used to talk nonsense; ate like a glutton; committed mischief; became violent and troublesome. I then placed him under the treatment of a native hakim (quack), but it did him no good. I then took him to the civil hospital, but there too no good was done. About this time I had to go to Hyderabad for my marriage, so I took Metho with me to Hyderabad; he became worse, so I placed him under the treatment of Dr. Tarachand for a month, but finding no change, I sent him to the Asylum through the Sub-Divisional Magistrate, Hyderabad. This was the first time; second time he was sent by the Civil Surgeon of Karachi to the Asylum.

5. Did Metho indulge in any kind of intoxicating drug; if so, of what kind?

5. I have never seen him drink bhang or indulge in any kind of intoxicating drug, such as ganja or charas, and not even liquor.

6. Can you assign any reason for his insanity; was he in any financial or other difficulties?

6. I cannot assign any reason. He had had no difficulties.

7. Can you tell me whether there were any cases of insanity either in your father's or mother's family?

7. No; none.

8. How long after his first return from the Asylum that he kept well?

8. For a few days he was perfectly well and calm; then he began to give trouble; committed mischief; abused people. These things went on for two or two and a half months, when he was made over to the police.

9. Are you or any member of your family in the habit of taking intoxicating drug?

9. No.

Statement of Durrian, son of Detaram, aged 24 years, Hindu Lohana, residing at Karachi.

1. Do you know Metho Detaram, who is now an inmate in the Lunatic Asylum at Hyderabad, and what is he to you?

1. Yes, I know Metho, he is my younger brother.

2. When did he first show symptoms of insanity, and what was this age then?

2. He first showed symptoms of insanity little over three years ago, he was then about 17 years old.

3. How many times has he been sent to the Asylum?

3. Twice.

4. What symptoms of insanity did he first exhibit?

4. He was talking nonsense, used to eat much, commit mischief, break things; use violence. At first we put him under the treatment of native hakims, then under European doctors, but without any good result. The first time he was sent to the asylum by the Divisional Magistrate, Hyderabad, he remained there for a year and was then released; soon afterwards he again showed signs of insanity and was worse than before; we were then obliged to hand him over to the police, who sent him to the Civil Surgeon and then again to the asylum.

5. Can you tell me whether your brother Metho indulged in any kind of hemp drug, which form of the drug?

5. Metho, to the best of my knowledge, never indulged in any kind of intoxicating drug. He very seldom used to take a little liquor.

6. Can you tell me whether the medicine prescribed to him contained any hemp drug?

6. No; I cannot say that.

7. What occupation did your brother Metho follow when he first became insane, and what did he do the second time?

7. He was employed by one Chello Mulchand, coffee shopkeeper at Ghizri, and the second time he did nothing. He was with Chello for two or two and a half years.

8. Can you say whether during the two or two and a half years that he was employed at Chello's he took to intoxicating drug. Had you any means of knowing that?

8. He used very often to come to us, and I have never seen him using any kind of hemp drug, nor have I ever seen him intoxicated.

9. Was he married or unmarried when he became insane?

9. He was unmarried and has not married as yet.

10. Has there been any insanity in your father's or your mother's family?

10. No; not that I am aware of.

11. To what cause do you then assign Metho's insanity?

11. I cannot say.

12. Had he any difficulties?

12. Not that I am aware of.

Statement of Tevo, son of Jetho, aged 54 years, Hindu Lohana, residing at Karachi.

1. Do yo know Metho, son of Detaram. and where he is now?

1. I know Metho. He is now in the Lunatic Asylum at Hyderabad.

2. How many times has he been sent to the Asylum and when?

2. He was first sent to the Asylum some 3½ years ago and remained there for 12 or 14 months, got all right and came to Karachi, where he did well for two or three months, and then again showed symptoms of insanity. He was therefore sent back to the Asylum.

3. To what cause do you assign his insanity. Did he indulge in any kind of hemp drug or any other intoxicating drug?

3. No; he did not. I am married to his sister this last 12 years, and I know the boy ever since. I cannot assign any cause for his insanity.

4. What occupation Metho followed when he became insane?

4. He was employed as a servant at one Chello Mulchand's at Ghizri, where he had a coffee shop; he became insane there and came to live with us. He was very troublesome, given to acts of violence, was very abusive, used to eat much, go about naked and talk nonsense. He was first placed under the treatment of a native hakim, then that of a European doctor, and finding no change he was sent to the Asylum.

5. Can you tell me what medicine the native hakim gave Metho and whether there was any hemp drug in it?

5. I can't say what medicine the native hakim gave him. It was for drinking, but I can't say whether it contained any hemp drug or whether it caused any intoxication.

6. Has there been any insanity in his father's or mother's family?

6. Not to my knowledge.

7. Was Metho in any difficulties?

7. No.

8. Is he married or unmarried?

8. Unmarried.

Statement of Chello, son of Mulchand, aged 43 years, Hindu Lohana, shopkeeper, Ghirzi Sanitarium, Karachi.

1. Do you know Metho, son of Detaram, and how have you become acquainted with him?

1. I know Metho Detaram. He was my servant. I used to pay him Rs. 3 a month and food.

2. How long did he serve with you, and why did he leave your service?

2. He was with me for about two and a half or three years and left my service as subsequently his mind was little unhinged. He left my service of his own accord.

3. When did he leave your service?

3. About three years ago.

4. Can you tell me whether Metho was in the habit of taking hemp or other intoxicating drug during the time he was in your service?

4. No; I have never seen him take hemp drug of any kind, nor any other intoxicating drug. Very seldom he used to take a little liquor and only when I offered him.

5. Can you tell me whether he took bhang even in the hot weather?

5. No; I have never seen him.

6. Was he in any financial or other difficulties?

6. No; not to the best of my knowledge.

7. Can you assign any cause for his insanity?

7. No; I cannot.

G. BAINBRIDGE, M.D.,
Civil Surgeon, Karachi.

Illegible,
Magistrate, F. C.,
Karachi.

Metho has always denied the use of bhang, but knew how it was prepared and smoked. I tried an experiment one afternoon and got bhang, ganja and charas; and Sarandas (who is now discharged cured) acted as host. All the Mawalees (Sobo, Heeramona, Luximon, Gulazim, Metho and others) were attracted; and Metho, in his quiet sensible way was the most eager to join and help in their preparation and to assist in their consumption. He is now almost well, and he confesses to having used 1 pice bhang, 2 pice ganja and 2 pice charas every day, and he says moreover that his brothers and employer, Chello, knew all about it.

J. KEITH,
Superintendent, Hyderabad Asylum.

CASE OF DHOLU, SON OF JETHANAND.

No. 7.

Statement of Jethanand, son of Lahorimal, aged 50 years. Hindu Lohana, trader, resident of Manjhond in the Karachi district.

1. Do you know Dholu, and what is he to you?

1. Yes, I know him; he is my son.

2. Did he become insane; and, if so, when and what were the symptoms; what was his age when he first showed symptoms of insanity?

2. My son Dholu showed symptoms of insanity 16 months ago; he was then 16 years old. At first he became abusive, speaking incoherently and nonsense; used to quarrel with members of the family and used to eat much. For a few days we confined him in a room; there he one day tore his clothes and became naked; he also became dirty in his habits. After three weeks of this state I took him to the Civil Surgeon of Hyderabad for treatment, and he advised me to send him to the lunatic Asylum there. I did so; he was kept in the Asylum for three months and was then released perfectly cured. He is now nearly 18 years of age.

3. Was this his first time in the Asylum, or has he been sent before ?	3. This was his first time.
4. Can you say whether your son Dholu indulged in any intoxicating drug ; if so, of what kind ?	4. To the best of my knowledge, my son did not indulge in or make use of any kind of intoxicating drug before or after his insanity. During the summer when the weather was very hot he used, on very rare occasions, to drink bhang, but in a very moderate form and in a very small quantity.
5. To what cause do you then assign his insanity ?	5. Before becoming insane Dholu was suffering from piles and passed good deal of blood ; he was consequently placed under the treatment of a native hakim (quack), who almost cured him of his piles. A month after that he showed symptoms of insanity.
6. Can you tell me what was the medicine given by the native hakim ; was it for external or internal use ? If used internally, can you say whether it contained any intoxicating or narcotic ingredients ?	6. To the best of my recollection the medicine given was for external use ; he may probably have given something to drink, but I am not positive of that.
7. Has there been any kind of insanity in your or your wife's family ?	7. No. None.
8. Did your son again show symptoms of insanity after he was brought from the Asylum, and did he ever afterwards become troublesome ?	8. No. Nor did he become troublesome ; on the contrary for two or three months after his release from the Asylum he did not go out of the house through shame.
9. Had he any financial or other difficulties ?	9. None whatever.
10. Is he married ; if so, before or after the insanity?	10. He is married and was married before the insanity.
11. What was he doing before he became insane ?	11. He was employed in the shop of his maternal uncle at Sehwan.
12. Did you tell the Superintendent of the Asylum at Gidu Bundar that your son indulged in bhang ?	12. No. I don't recollect having said so. If I have told him, I must have said that he occasionally took bhang in the hot weather.

Evidence of Dholu, son of Jethanand.

No. 7, Lunatic Dholu, son of Jethanand.

1. Were you admitted into the Asylum at Gidu Bundar ?	1. Yes, I was.
2. Did you ever indulge in bhang or any intoxicating drug ?	2. No, I did not indulge in any intoxicating drugs ; occasionally in the summer when it was very hot I used to take a little bhang in a liquid state and in a very mild form. I did not take any other drug but that occasionally I used to take a little liquor, but that was on very rare occasions.
3. What is your age now and what was your age when you became insane ?	3. I am now 18 years old. I was little over 16 years when I became insane.

4. Can you assign any reason for your insanity?

4. I was suffering from piles and I lost good deal of blood for three or four months and was in very great pain. I was under the treatment of a native hakim (quack) who cured me. He gave me both medicines to drink as well as to apply externally. I am not entirely cured of the disease, but I don't lose any blood now. I took the internal medicine for one or two days. I think he gave me some opening medicines. I can't say whether there was any intoxicating drug in them, but I did not get any intoxication.

Hiranand, son of Gyanchand, aged 35 years, Hindu, Lobana, Merchant, resident of Manjhand, and now of Karachi States.

1. Do you know Dholu, son of Jethanand?

1. Yes, I know Dholu; his father Jethanand is a partner of ours.

2. Do you know them intimately?

2. Yes, I know the whole family intimately. They are all residents of our village Manjhand.

3. Do you know that Dholu had become insane and was sent to the Lunatic Asylum at Hyderabad?

3. Yes, I know that.

4. Do you know whether Dholu indulged in any kind of intoxicating drug?

4. To the best of my knowledge I have never seen him indulge in any kind of drugs, such as bhang, charas or ganja. He used occasionally to take bhang in the hot weather in a very mild form. On rare occasions he used to take a little liquor. I have never seen him intoxicated.

5. Can you then assign any reason for his insanity?

5. No, I cannot.

6. Can you tell me whether Dholu's father or his relatives are in the habit of indulging in bhang or any other intoxicating drug?

6. To the best of my knowledge I have never seen any member of his family indulging in intoxicating drugs. I know his father used to drink a little bhang now and then during the hot weather.

7. Can you tell me whether any member of Dholu's family or any relatives of his mother were or are affected with insanity?

7. No, none.

G. BAINBRIDGE, *M.D.*,
Civil Surgeon, Karachi.

Illegible,
Magistrate, F.C.,
Karachi.

Dholu, when he was in the Asylum, confessed all along to the use of hemp drugs.

J. KEITH,
Superintendent, Hyderabad Asylum.

CASE NO. 8.

Statement of Matadin.

I state that my name is Matadin, my father's name is Minbi, my age is 30 years, my religion is Hindu, my caste Kahir, my calling Mali, my residence now Hyderabad, but inhabitant of village Gadeya, Zilla Nawab Ganj, Bara Banki, North-Western Provinces.

I have been in Hyderabad since five years. Before that I was in my native place. Since coming to Hyderabad I have been employed in the Municipal garden as a *chota* Mali. For a short time I was Dewan Chandasing's servant. I was confined in the Lunatic Asylum for six months and seven days after I became insane. It is now nearly eight months since I have been discharged from the Asylum. The cause of insanity is that I smoke *ganja* and *charas* daily. I contracted this habit since my infancy. I know my father used to smoke *ganja* and *charas* twice a day, each time one pice worth. My father never became insane. He had four brothers who did not smoke *ganja* and *charas* or drink *bhang*. So far as I know none of my family members have become insane, but smoking of *ganja* and *charas* is a common thing among our caste people. While I was at home I used to smoke *charas* and *ganja* twice a day, about one pice worth at a time (morning and evening). One tola of *ganja* is to be had for 1 anna and 3 pies and one tola *charas* for 6½ annas. After my coming to Hyderabad I began to smoke *ganja* and *charas* three times a day, morning, mid-day and evening, each time one pice worth. One day I purchased one tola of *charas*, and smoked it in company of ten persons and became insane at once because my head was affected by it. The effect of *charas* is stronger than that of *ganja*. It produces intoxication at once and lasts for about 2 or 3 hours, while *ganja* produces intoxication after 2 or 3 minutes and remains for about an hour and and a half. I do not drink *bhang* often, but only on big religious days, say three or four times in a year. Since I have been discharged from the Asylum, I never had any fits of insanity. The reason is that I keep away from drinking narcotics. I have no relations here, but Maju, Head Mali in the Municipal Garden, is my countryman and knows me since I have come here. It is he who found me lying near the Fuleli Bridge and took me to the Police Chowki, whence I was sent to the Asylum. This is the first time that I have become insane.

NOTE.
One pice worth.
Charas $\frac{1}{16}$th of a tola.
Ganja $\frac{1}{8}$th do.
Bhang $\frac{3}{4}$th do.

One pice worth.
Charas $\frac{1}{16}$th of a tola.
Ganja $\frac{1}{8}$th do.
Bhang $\frac{3}{4}$th do.

J. KEITH,

Civil Surgeon, Hyderabad.

THATTUMAL.

The 22nd November 1893. *Magistrate, Second Class.*

Statement of Maju.

I state that my name is Maju, my father's name is Sahibdin, my age is 40, my religion is Hindu, my caste is Mali, my calling Gardener, my residence Jeypore, Zilla Nawab Gunj Bara Banki, North-Western Provinces.

I know Matadin since he has come to Hyderabad, say about five years. He was employed as a *chota* mali for about two years, and after that for a short time as a servant to Dewan Chandasing; while in his service he became insane. I know Matadin used to smoke *ganja* and *charas* three times a day, one pice worth each time. One day I found him lying near the Fuleli Bridge near the town. I took him to the Police Chowki with a view to his being sent to the Lunatic Asylum for treatment. He appeared dangerous

then and talked nonsense and spoke incoherently. I am not acquainted with his family, but my village is at a distance of five miles from that of his. He is now again employed in the Municipal Garden. I take particular care of him. He has not smoked *charas* and *ganja* since his discharge from the Asylum. The result is that he is all right and has had no fits of insanity. So far as I know this was the first time that he became insane.

J. KEITH,

Civil Surgeon, Hyderabad.

THATTUMAL,

The 22nd November 1893. *Magistrate, Second Class.*

NOTE.

Matadin has no relations here. He belongs to North-Western Provinces. Maju knows him for about five years, and states that Matadin was in the habit of smoking *charas* and *ganja*, and his insanity is ascribed to the use of narcotics. It cannot be ascertained whether it is hereditary or not; but the statement of Matadin shows that it is not.

J. KEITH,

Civil Surgeon, Hyderabad.

THATTUMAL,

The 22nd November 1893. *Magistrate, Second Class.*

CASE NO. 9 OF SHIKRO.

I state that my name is Mahomed, my father's name Gahno, my age about 30 years, my religion Mahomedan, my caste Chano, my calling Labourer, my residence Gote Lalleno Nunari, Taluka Hyderabad.

Shikro, fakir, was my only brother. He was in the Lunatic Asylum for about two months, and died at our village about ten months ago. Before he became insane, he used to drink *bhang* daily, once in the evening, worth one pice. This habit he contracted since infancy. He did not smoke *charas* or *ganja*. My father was also a fakir, and used to drink *bhang* every morning and evening. That was also about one pice worth, and sometimes a little more. My father died about 29 years ago. Shikro was my elder brother by two or three years. No one was and is insane in our family and was and is addicted to using narcotics excepting my father and brother. My uncle is alive, and does not use narcotics. My brother became mad once before he was sent to the Asylum. The duration was about two years. When he became mad the second time, he was caught by the Police and sent to the Asylum for treatment. He was discharged, and died at home after seventeen or eighteen days. I live at a distance of six miles from Hyderabad town. He was not epileptic, but was considered dangerous to others.

J. KEITH,

Civil Surgeon, Hyderabad.

THATTUMAL,

The 22nd November 1893. *Magistrate, Second Class.*

CASE NO. 10, BAXALI.

I state that my name is Baxali, my father's name Imambux, my age about 25 years, my religion Mahomedan, my caste Babar, my calling Blacksmith, my residence Hyderabad town.

I was about five months in the Lunatic Asylum. It is about eleven months since I have been discharged from it. I drink *bhang* now daily in the evening, about one pice worth, since my discharge from the Asylum. I have not lost my senses. Before I became insane, I used to smoke *charas* occasionally in company with others; sometimes I purchased *charas* with my own money, worth one pice (note one twenty-fourth part of a tola), and smoked alone. But I was not a daily smoker of *charas*. I also drank *bhang* (morning and evening), worth one pice at a time (*viz.*, ¾ths of a tola). My father and uncle are dead. I have no relatives in the house excepting my wife. My father used to drink *bhang* daily twice (morning and evening), worth one pice at a time. My uncle also drank *bhang* twice, worth one pice at a time. None of my family members used *ganja* or *charas*. We work near fire, and therefore some of us to cool ourselves drink *bhang*. I got into the habit of smoking *charas* about six years ago. Before I got mad, I had gone out for fifteen days, so I had not tasted *bhang* or smoked *charas* during the interval. On the day I returned to Hyderabad I drank a cup of *bhang*, worth one pice, and on the same day I lost my senses. I was taken to the Lunatic Asylum about four months after I became insane. This is the first time that I have become mad; so far as I know and hear there was no insane person in our family.

J. KEITH,

Civil Surgeon, Hyderabad.

THATTUMAL,

Magistrate, Second Class.

The 22nd November 1893.

I state that my name is Butchal, my father's name Mahomed Hussain, my age about 60 years, my religion Mahomedan, my caste Battu, my calling Blacksmith, my residence Hyderabad town.

I know Baxali, son of Imambux. He is not my relative, but a neighbour. His house is near mine. I know him from his infancy. His parents are dead. There is no other relation in his house except his wife. He drinks *bhang* daily in the evening, worth one pice (note 1 lb of *bhang* is sold for Re 0-6-6) to cool himself after day's work near fire. I know he occasionally smoked *charas* and drank *bhang* daily. His father was not insane. He used to drink *bhang* also both morning and evening, worth one pice at a time. His father had a brother also. He used to drink *bhang* too. In fact we all Lohars (Blacksmiths) indulge in a small quantity of *bhang* daily in the evening to cool oursleves because we work near fire. Baxali was five months in the Lunatic Asylum. I cannot say why he became mad; but I think smoking of *charas* is the cause of it. It is now eleven months since he has been discharged from the Asylum. He is all right now, and has had no fit of insanity since then. When he became insane he talked nonsense, and spoke incoherently. He was not epileptic, but was dangerous to society. People were afraid of him. He was confined in his house by his brother-in-law. This is the first time that he got mad. There was no person insane in his family and none smoked *charas* or *ganja*.

J. KEITH,

Civil Surgeon, Hyderabad.

THATTUMAL,

Magistrate, Second Class.

The 22nd November 1893.

NOTE.

It appears from local inquiry made, besides the above statements, that before Baxali became insane he was in the habit of smoking *charas* and drinking *bhang* daily in company

of other persons. There was no insane person in his family, and none smoked *charas* or *ganja*. He became mad because he freely indulged in *charas*-smoking. When he became insane, he was confined in his house, as he was considered dangerous to society. His insanity lasted for about ten months. He was not epileptic, but talked nonsense. The insanity is not hereditary. This is the first time that he has become insane. His male family members used to drink a small quantity of *bhang* daily.

J. KEITH,

Civil Surgeon, Hyderabad.

THATTUMAL,

Magistrate, Second Class.

The 22nd November 1893.

CASE NO. 11 OF SEVO.

I state that my name is Ailmal, my father's name Tanumal, my age about 30 years, my religion Hindu, my caste Lohano, my calling Curd-seller, my residence Hyderabad town.

Sevo, who was in the Lunatic Asylum for about one month and a half, was my only brother. He died fifteen days after his discharge from the Asylum. This occurred about nine months ago. My parents are dead. I have no other relations. So far as I know there was no other insane person in our family. My brother was addicted to drinking *bhang* and smoking *charas* and *ganja* and also eating and smoking opium since his infancy. He was my elder brother, and was 35 years of age when he died. He drank *bhang* morning and evening, about one pice worth. He was fond of smoking *charas* twice a day, worth one pice at a time. *Ganja* he sometimes smoked. That was also one pice worth. When he ate opium he did not smoke opium (*chandul*), but when he smoked he did not eat opium. That was also one pice worth. I have been seeing him use these narcotics since I have come to maturity. He was a mason, and used to earn about one rupee a day. He became insane soon after the death of my mother. It appears that he took her death to heart, and coupled with the fact of his affected brains caused by constant use of the above drugs he lost his head. He was not dangerous to society, but people were afraid of him. He talked nonsense and spoke incoherently. My father was not in the habit of drinking *bhang* or smoking *charas* or *ganja*. My uncle is also dead. He also did not indulge in narcotics. In fact so far as I know none of our family members was in the habit of drinking *bhang* or smoking *charas* or *ganja*.

J. KEITH,

Civil Surgeon, Hyderabad.

THATTUMAL,

Magistrate, Second Class.

The 22nd November 1893.

NOTE.

The enquiry made on the spot from several persons in the neighbourhood shows that Sevo was addicted to the use of *charas*, *ganja*, *bhang*, and opium from his infancy. He was always seen with a *chelum* in his hand (pipe), in which *ganja*, etc.; is smoked. This shows to what extent he was wedded to the habit of using narcotic drugs. There has been no insane person in his family. His head was doubtless affected by constant use of narcotics. He was not epileptic, but was dangerous to others. He got insane for the first time. His family members did hot indulge in narcotics.

J. KEITH,

Civil Surgeon, Hyderabad.

THATTUMAL,

Magistrate, Second Class.

The 22nd November 1893.

CASE NO. 12 GULAZIM.

From Lieutenant A. F. Bruce, Assistant Political Agent, Quetta, to the Superintendent, Lunatic Asylum, Hyderabad (Sind), dated Quetta, the 30th November 1893, No. 1907.

In reply to your endorsement No. 126, dated 20th November 1893, I have the honour to inform you that the family of the Lunatic Gulazim, son of Zalmir, resides outside British territory. I am, therefore, unable to conduct the necessary inquiry into his past, personal and family history.

From the Superintendent, District Jail, Shikarpur, to the Superintendent, Lunatic Asylum, Hyderabad, dated Shikarpur, 15th November 1893, No. 1134.

With reference to paragraph 2 of the Secretary, Indian Hemp Drugs Commission's No. 149 of 16th October last, conveyed in your endorsement No. 123 of 10th instant, I have the honour to forward herewith true extract from Vital No. 8, which contains observations of the then Medical Officer as to the demeanour, &c., of Gulazim, son of Zalmir, and to state that the information as regards his indulgence in hemp drugs was obtained from the prisoner.

2. As regards his previous history before admission into this Jail, no information can be had locally, as the prisoner belongs to one of the tribes wandering over Yakhistani hills.

Register of prisoners, convicted and under-trial, under Medical observation as to mental condition and to be reported on.

Register No.—1197.	Prisoner's name—Gulazim Zalmir.	Age—30 years.	Offence—394, I.P.C.	Sentence and date of conviction—1 year. 4th July 1892.	Date of arrival in Jail—7th July 1892.
Date of admission into Hospital or on which came under observation.	Observations of Medical officer as to demeanour, conduct and general health of prisoner (to be recorded weekly or oftener if there is anything special to record).				Result.
3rd Aug. 1892.	Prisoner has not been working well for the past week or so. He works for a short time and then stops. When ordered to resume his work he comes to blows with the warders. When ordered by me to go and do his work he said he was ready, but after doing the work for half an hour he quietly sat down and refused to get up and work. He eats and sleeps well. He does not fight with any one unless told to work. He has a sort of wild look.				
7th	Prisoner continues in the same state. Does no work. Was seen throwing vegetable into other cells. His habits are also occasionally dirty.				
10th	The prisoner refuses to work. He made a big hole in the wall of his cell and tore his blanket into pieces. Habits are filthy.				
15th	Continues in the same state. Sits quiet. Takes his food.				
20th	Continues the same; when told to work he fights. Occasionally he works for half an hour or so and then stops.				
21st	Prisoner was sitting quite naked. He had applied dry earth all over his body. Had a wild look. Does not reply as to why he did so.				
26th	Continues in the same state. Refuses to work. Sits quiet the whole day. Sleeps for 4 or 5 hours in 24 hours.				
30th	Has applied dust over his face and legs. His habits are filthy.				
Sept. 5th ...	Continues in the same state.				
10th	Certified as insane.				

MULCHAND GANGARAM,
Superintendent and Medical Officer,
District Jail, Shikarpur.

CASE NO. 13, DULSINGAR SINGH.

This man was a native of Hindustan, a mendicant with no known relations or friends in Hyderabad.

J. KEITH,
Civil Surgeon, Hyderabad.

LUNATIC ASYLUM, RANGOON.

(SUPERINTENDENT, DR. BAKER.)

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (Statement VII).	Type of insanity (Statement VI).	State of health on admission.	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
1. Zinulabdin; Mussulman; Tailor; Rangoon; 20, No. 262.	Ganja-smoking.	Toxic. ...	Fair ...	The medical certificate merely refers to the "History" which shows— Causation { Previous attacks. Not known. Hereditary history. Not known. Predisposing Ganja-smoking. Exciting. Ganja-smoking. Duration of disease.—One month. "Is not conscious of his condition power of attention. Most restless. Talks to himself. Dirty in his habits." Not suicidal or dangerous. Nervous system. Normal. Reflex action. Ditto. Special senses. Ditto. Pupils. Ditto.	Admitted 3rd February 1892. No improvement until 6th June, when he "answers questions to the point." On 26th June "very much improved." On 15th July "Sane." Discharged cured on 31st August 1892.
2. Jung Bahadur; Hindu; Jail peon; Rangoon; 25, No. 267.	Ganja-smoking.	Toxic ...	Fair ...	The medical certificate shows the man to be dangerous, suicidal and destructive, queer for three weeks, talking to himself and behaving strangely; finally he became excited and violent. He is sleepless. The history shows— Causation { Previous attacks. Not known. Hereditary history. Not known. Predisposing. ? Exciting. Ganja. Nervous system. Normal. Reflex action. Ditto. Special senses. Ditto. Pupils. Natural.	Admitted 26th February 1892. He began to show symptoms of improvement from the first and was discharged cured on 13th May 1892.
3. Narada; Hindu; Bhisty; Khaira; 28, No. 330.	Bhang	Toxic ...	Fair ...	The Medical Officer of Shwebo says, "About three months ago he was brought to me in a semi-comatose state apparently from bhang. He recovered, but his mind has been deranged ever since. He was quite demented.	Admitted 19th September 1892. No improvement until 3rd December, when the entry is "Improving." On 19th December he is "Sane," and on 31st March 1893, he is discharged cured.

Hemp Drug cases admitted in 1892.

Name, race, occupation, district, age and register number of lunatic.	Alleged cause of insanity (statement VII).	Type of insanity (Statement VI).	State of health on admission	Facts ascertained from the papers.	Asylum history and facts ascertained from Asylum registers and from inquiry from Superintendent.
Narada—*contd.*	Bhang	Toxic ...	Fair ...	Saw visions of animals and devils crawling about him and had to be kept in close custody as he attempted to throw himself off the roof of the hospital. He is now suffering from dementia and is feeble-minded and childish in his manners and speech." The history shows— Causation { Previous attacks. None, so far known. / Hereditary history. Had a brother insane. / Predisposing. None. / Exciting. Bhang. First attack. Not subject to epilepsy. Duration. Three months. Nervous system. Normal. Reflex action. Ditto. Special senses. Ditto. Pupils. Ditto.	

Notes.

1. The form devised apparently by Dr. Griffith when Superintendent deserves notice for certain detailed information it contains in the "history."
2. The total number of admissions from all causes in 1892 was—

Criminal	Males	...	18
	Female	...	1
Non-criminal	Males	...	66
	Females	...	17
		TOTAL ...	102

Of these, the above three cases were the only cases ascribed in Statement VII to hemp drugs.

3. Only two ganja cases are shown under toxic insanity in Statement VI. The bhang case is not so shown.

8th February 1894.

Report of the Superintendent, Rangoon Lunatic Asylum, on the Hemp Drug cases of 1892.

With reference to your letter No. 106-Camp, dated the 6th March 1894, I have the honour to forward correspondence,* and to state that as the three men in question cannot be found, I am precluded from making any further inquiries into the circumstances dealt with in your letter under reply.

* Not printed.

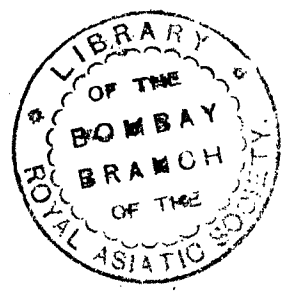
G. C. Press, Simla.—No. 70 H. D. C.—2-11-94.—1,510.

Indian Hemp Drugs Commission.

Vol. III.

APPENDICES.

MISCELLANEOUS.



BX-1-30

SIMLA:
PRINTED AT THE GOVERNMENT CENTRAL PRINTING OFFICE.

1894.

VOLUME III.—APPENDICES.

CONTENTS.

	PAGES
Map of India showing the area where the hemp plant grows wild, and where it might run wild under favourable circumstances	
Resolution of the Government of India, Finance and Commerce Department, No. 2792-Ex., dated the 3rd July 1893, appointing the Commission	1—2
Memorandum on hemp drugs in Bengal, by Mr. K. G. Gupta, Commissioner of Excise, Bengal	3—17
Memorandum on hemp drugs in Assam, by Mr. J. D. Anderson, Officiating Commissioner of Excise	18—23
Memorandum on hemp drugs in the North-Western Provinces and Oudh, by Mr. T. Stoker, Commissioner of Excise	24—45
Memorandum on hemp drugs in the Punjab, by Mr. T. G. Walker, Commissioner of Excise ...	46—56
Memorandum on hemp drugs in the Central Provinces, by Mr. H. V. Drake-Brockman, Officiating Commissioner of Excise	57—81
Memorandum on hemp drugs in Madras, by Mr. W. O. Horne, Acting Secretary, Board of Revenue, Madras	82—87
Memorandum on hemp drugs in Bombay, by the Hon'ble T. D. Mackenzie, Commissioner of Customs, Salt, Opium and Abkari	88—101
Memorandum on hemp drugs in Sind, by Colonel R. J. Crawford, Acting Commissioner in Sind	102—105
Memorandum on hemp drugs in Berar	106—115
Memorandum on hemp drugs in Ajmere-Merwara, by the Assistant Commissioner and Collector of Excise Revenue	116—119
Memorandum on hemp drugs in Coorg, by Mr. G. F. Meiklejohn, Commissioner of Coorg ...	120—123
Memorandum on hemp drugs in Baluchistan (Quetta-Pishin), by the Political Agent and Deputy Commissioner, Quetta-Pishin	124—127
Kashmir State Memorandum	128—130
Nepal Darbar do.	131
His Highness the Nizam's Dominions Memorandum	132—134
Memorandum on Ganja in Mysore, by Mr. L. Ricketts, Excise Commissioner	135—141
Memorandum regarding Ganja and its preparations in Mysore, by Mr. J. G. McDonnell, Special Assistant Excise Commissioner in Mysore	142—149
Memorandum by Colonel Magrath, District Magistrate and Collector, Civil and Military Station of Bangalore	150—151
Baroda State Memorandum	152—157
Memorandum by Mr. R. H. Gunion on hemp drugs in Central India	158—163
Indore State Memorandum	164—165
Jeypur State do.	166—167
Jodhpur State do.	168—169
Bikanir State do.	170—173
Alwar State do.	174—177
Bhartpur State Statement	
Kotah State Memorandum	178
Jhallawar State do.	179
Tonk State do.	180—181
Bundi State do.	182—183
Shahpura State do.	184
Dholpur State do.	185
Sirohi State Statement	186—187

PAGES

Karauli State Memorandum 188

Kishengarh State do. 189

Jaisalmere State do. 191

Report by Brigade-Surgeon-Lieutenant-Colonel D. D. Cunningham, F.R.S., C.I.E., on the nature of the effects accompanying the continued treatment of animals with hemp drugs and with dhatura ... ... 192—196

Report by Mr. D. Hooper, Government Quinologist, Madras, giving the results of analyses of samples of hemp drugs ... ... 197—205

Report by Surgeon-Captain J. F. Evans, Officiating Chemical Examiner to the Government of Bengal, regarding the physiological investigation concerning hemp drugs ... ... 206—227

Report by Dr. G. Watt, M.B., C.M., C.I.E., &c., Reporter on Economic Products to the Government of India, on *Cannabis sativa* ... ... 228—230

Letter dated the 18th June 1894, from Brigade-Surgeon-Lieutenant-Colonel George King, Superintendent, Royal Botanic Garden, Calcutta ... ... 230—231

Memorandum by Brigade-Surgeon-Lieutenant-Colonel G. King, C.I.E., Director of Botanical Survey of India, showing the geographical distribution of the wild hemp plant in India and the physical conditions requisite for the cultivated variety 232

Report by Mr. B. C. Basu, Assistant to the Director of the Department of Land Records and Agriculture, Bengal, on the spontaneous growth of the wild hemp plant in the districts of Bhagalpur and Purnea ... ... 233—235

Note by Mr. B. Robertson, Deputy Commissioner, Nimar, on the cultivation and preparation of ganja in Nimar ... ... 236—237

Memorandum by Mr. H. V. Drake-Brockman, Officiating Commissioner of Excise, Central Provinces, on the cultivation and manufacture of ganja in the Khandwa Tahsil of the Nimar District ... ... 238—239

Report by Mr. H. M. Lawrie, Officiating Deputy Commissioner, Bhandara, Central Provinces, on the consumption of ganja among the Powers ... ... 240—242

Bulletin on the cultivation and manufacture of ganja in Madras, by Mr. C. Benson, Deputy Director, Agricultural Branch, Madras ... ... 243—245

Note by Mr. G. A. Grierson, C.I.E., Magistrate and Collector, Howrah, on references to the hemp plant occurring in Sanskrit and Hindi literature ... ... 246—249

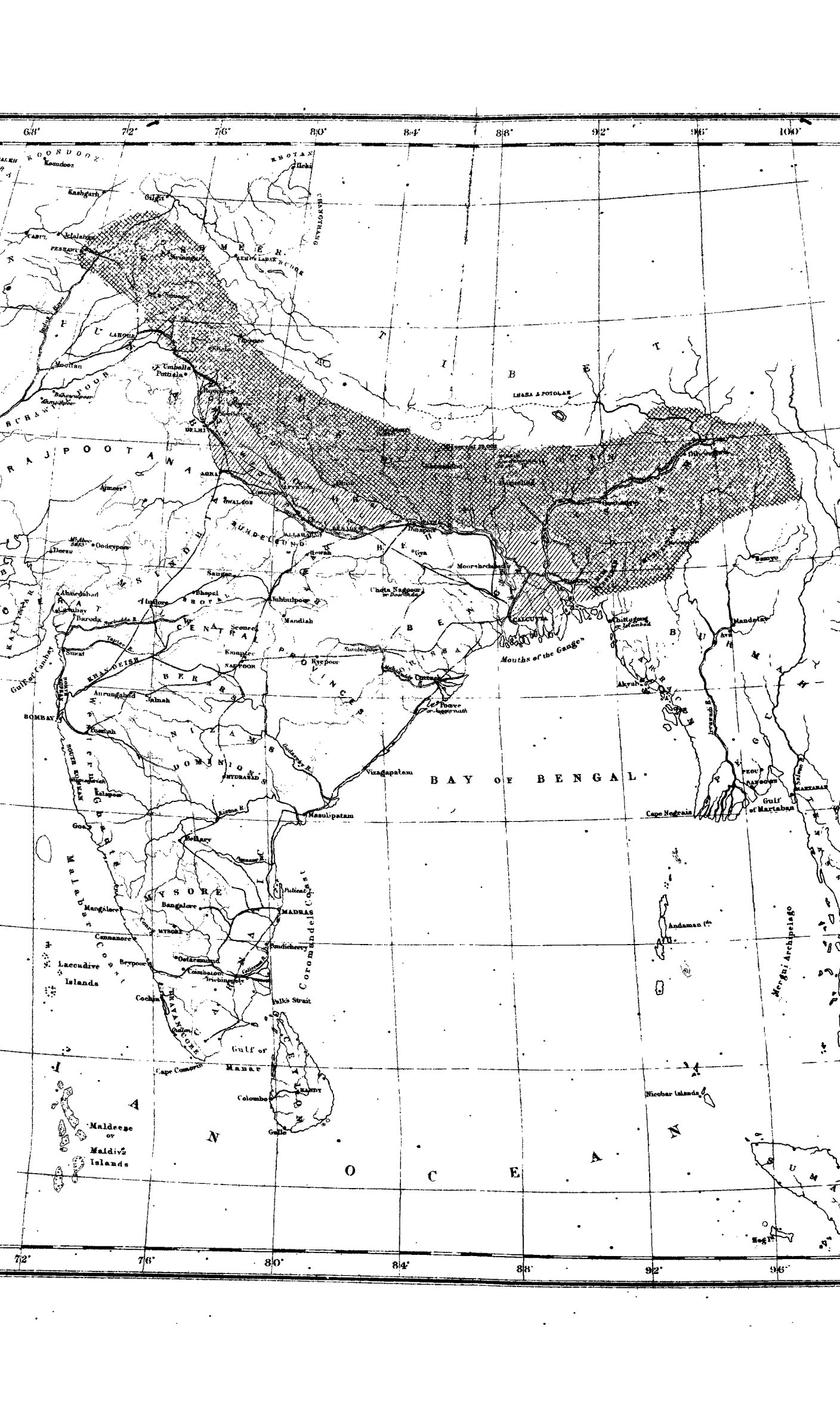
Note by Mr. J. M. Campbell, C.I.E., Collector of Land Revenue and Customs and Opium, Bombay, on the religion of hemp ... ... 250—252

Note by Babu Abhilas Chandra Mukerji, Second Inspector of Excise, Bengal, on the origin and history of Trinath worship in Eastern Bengal ... ... 253—254

Memorandum by Mr. R. G. Culloden, Assistant Collector of Customs and Superintendent of the Preventive Service, Rangoon, on the smuggling of ganja into Rangoon ... ... 255—256

Letter No. 133—11-E., dated the 5th March 1894, from the Assistant Secretary to the Financial Commissioner, Burma, with enclosures, regarding the smuggling of ganja into Burma, and the success of the system of prohibition which has been adopted ... 257—261

Analysis made by the Commission of cases referred to by witnesses in answering question No. 53 ... ... 262—266


68°
72°
76°
80°
84°
88°
92°
96°
100°
Koondooz
Kashgarh
Ilchi
Bhotan
Iskalabad
Peshawur
Attock
Moultan
Umballa
Puttiala
Bhawulpoor
Thanesir
Delhi
Meerut
Agra
Ajmeer
Gwalior
Oodeypoor
Deesa
Sangor
Bhopal
Indore
Jubbulpoor
Mandlah
Baroda
Surat
Nagpoor
Ryepoor
Aurungabad
Jalnah
Bombay
Poonah
Sholapoor
Goa
Bellary
Mangalore
Bangalore
Cannanore
Beypoor
Laccadive Islands
Cochin
Palk's Strait
Cape Comorin
Gulf of Manar
Colombo
Galle
Maldeese or Maldive Islands
Patna
Monghir
Bhaugulpoor
Rajemahl
Moorshedabad
Burdwan
Gya
Benares
Chota Nagpoor
Sumbulpoor
Cuttack
Pooree or Jagernath
Calcutta
Mouths of the Ganges
Chittagong or Islamabad
Akyab
Ramree
Mandelay
Pegu
Rangoon
Martaban
Gulf of Martaban
Cape Negrais
Andaman Is.
Nicobar Islands
Mergui Archipelago
Vizagapatam
Masulipatam
Pulicat
Madras
Pondicherry
Carical
Tranquebar
Negapatam
Tanjore
Trichinopoly
Combatoor
Dindigul
Ootacamund
Seringapatam
Cuddapah
Guddawry R.
Kistna R.
Taptee R.
Nerbudda R.
Sone R.
Ganges R.
Jumna R.
Sutlej R.
Indus R.
Chenab R.
Jhylum R.
Cabul R.
Ghuzny
Candahar
Sukkur
Hyderabad
Kotree
Jessulmere
Bhawulpoor
Mooltan
Lahore
Umritsir
Loodiana
Ferozepoor
Thanesir
Meerut
Delhi
Agra
Gwalior
Jubbulpoor
Mandlah
Sumbulpoor
Cuttack
Calcutta
Moorshedabad
Patna
Benares
Oude
Lucknow
Cawnpore
Futtehgurh
Bareilly
Rohilcund
Delhi
Meerut
Umballa
Puttiala
Lahore
Peshawur
Attock
Iskalabad
Kashgarh
Koondooz
Ilchi
Bhotan
Lassa & Potolar
Thibet
Himalaya Mts.
Hindoo Koosh
Sulimany Mts.
Vindhya Mts.
Ghauts
Malabar Coast
Coromandel Coast
Bay of Bengal
Arabian Sea
Indian Ocean
Rajpootana
Nerbudda
Berar
Nizam's Dominions
Mysore
Concan
Guzerat
Cutch
Scinde
Candeish
Aurungabad
Khandesh
Malwah
Bundelcund
Allahabad
Doab
Rohilcund
Oude
Cawnpore
Futtehgurh
Bareilly
Lucknow
Benares
Patna
Monghir
Bhaugulpoor
Rajemahl
Moorshedabad
Burdwan
Gya
Benares
Chota Nagpoor
Sumbulpoor
Cuttack
Calcutta
Pooree or Jagernath

VOLUME III.—APPENDICES.

No. 2792-Ex., dated 3rd July 1893.

Resolution by the Government of India, Finance and Commerce Department.

READ—

Despatch from Her Majesty's Secretary of State for India, No. 36 (Revenue), dated 16th March 1893, forwarding a copy of a question asked in the House of Commons, and of the answer given thereto by the Under-Secretary of State, regarding the appointment of a Commission to enquire into the production and consumption of hemp drugs in India.

Read also—

Correspondence ending with Despatch from the Secretary of State, No. 99 (Revenue), dated 20th October 1892, regarding the consumption of ganja in India.

RESOLUTION.—In the despatch recited in the preamble, Her Majesty's Secretary of State informed the Government of India that, in answer to a question put in the House of Commons, he had expressed his willingness to request the Government of India to appoint a Commission to enquire into the cultivation of the hemp plant in Bengal, the preparation of drugs from it, the trade in those drugs, the effect of their consumption upon the social and moral condition of the people, and the desirability of prohibiting the growth of the plant and the sale of ganja and allied drugs. In accordance with the announcement thus made, Lord Kimberley requested the Government of India to appoint a Commission for the purposes stated, and to issue such instructions as would ensure that the enquiry should be thorough and complete. His Lordship is of opinion that the investigation can hardly be confined to Bengal, but should extend to the whole of India, and that the Commission should be instructed to ascertain to what extent the existence of the hemp plant all over India affects the practical difficulty of checking or stopping the consumption of ganja, as distinguished from other narcotic drugs prepared from the hemp plant, and whether there is ground for the statement that bhang is less injurious than ganja to consumers.

2. In accordance with these instructions, His Excellency the Governor-General in Council has been pleased to appoint a Commission to conduct the enquiry desired by the Secretary of State. The following gentlemen are appointed to form the Commission :—

President:

The Honourable W. Mackworth Young, M.A., C.S.I., First Financial Commissioner, Punjab.

Members:

1. Mr. H. T. Ommaney, Collector, Panch Mahals, Bombay.
2. Mr. A. H. L. Fraser, M.A., Commissioner, Chattisgarh Division, Central Provinces.
3. Surgeon-Major C. J. H. Warden, Professor of Chemistry, Medical College, and Chemical Examiner to Government, Calcutta, Officiating Medical Storekeeper to Government, Calcutta.
4. Raja Soshi Sikhareswar Roy, of Tahirpore, Bengal.
5. Kanwar Harnam Singh, Ahluwalia, C.I.E., Punjab.
6. Lala Nihal Chund, of Mozaffarnagar, North-Western Provinces.

3. His Excellency the Governor-General in Council desires that the enquiry should be thorough and searching, but he leaves to the Commission full discretion to determine the best means of securing that result. Certain instructions are given in the following paragraphs; but these are not intended to be exhaustive, and the Commission have full authority to take up any branch of enquiry which in their opinion is likely to elucidate the subject and to aid the Government of India and the Secretary of State in deciding on the policy to be adopted in regard to hemp drugs.

4. It is desirable that the Commission should visit and take evidence in all or most of the Provinces of India: there are political objections to their holding sittings in Native States, but any information similar to that required regarding British India, which can be obtained regarding Native States, should be included in the Report.

5. The Commission should ascertain with as much precision as possible the extent to which the hemp plant is cultivated in each of the provinces of India in which it is grown. They should collect full information as to the manner in which the plant is cultivated for the production of drugs, and the methods of preparing the manufactured drug from the raw product, whether of the wild or the domesticated plant. Little is known at present as to the extent to which the wild plant can be used for the preparation of drugs, whether in the milder or the more noxious forms. This point has an important bearing on the possibility of introducing restrictive measures, and will require careful investigation. Full particulars should be obtained regarding all the different forms of the drug which are commonly used, especially ganja, charas, and bhang; and regarding the classes of the people by whom, and the extent to which, each is used. The physical and other effects of the use of hemp-drugs should be

thoroughly investigated, each variety of the drug being separately treated so far as that can be conveniently done. In conducting this branch of the enquiry, the Commissioners should avail themselves freely of the evidence of medical experts. They should endeavour to ascertain what proportion of the population habitually consumes hemp-drugs, and should thoroughly examine the testimony in support of the commonly received opinion that the use of hemp-drugs is a frequent cause of lunacy. They should ascertain whether, and in what form, the consumption of the drugs is either harmless or even beneficial, as has occasionally been maintained.

6. Full information should be compiled regarding the administrative arrangements in force in each province for controlling the growth of the plant, the manufacture and sale of the drugs, and their importation from other provinces or from Native States, and for imposing duties on cultivation and sale. It is understood that charas is imported into the Punjab on a considerable scale from foreign territory, and the question of the importation of hemp-drugs generally from foreign territory should receive the special attention of the Commission. The various systems employed for taxing the drug or the cultivation of the plant should be reviewed, with especial reference to the comparative incidence of this taxation in different parts of India, and to the comparative efficacy of the taxation imposed in restricting consumption, whether by the mere weight of the tax, or by the method and stage of imposition. It is known that the rates vary considerably in different provinces, but the precise effect of the variations is not fully understood. In this connection the Commissioners should notice any case in which the proximity of a Native State affects the production or consumption of the drug in British territory.

7. There are two points connected with the subject-matter of the enquiry which call for special investigation. The first of these is the danger lest prohibition, or restrictive measures of a stringent character, may give rise to serious discontent, and be resented by the people as an unjustifiable interference with long-established social customs. In some parts of India the use of hemp-drugs is, it is believed, common among fakirs and ascetics held in veneration by large classes of the population. In Bengal it has been stated that an infusion of the leaves of the plant is commonly offered to every guest and member of the family on the last day of the Durga Pujah: it has no ill effects, and its use is not considered reprehensible in any way. The Governor-General in Council desires that the Commissioners will endeavour to ascertain to what extent these and similar customs prevail in Bengal and other parts of India, and how far the use of hemp drugs forms a part of social, or possibly religious, ceremonial or observance, and they should, if possible, take the evidence of witnesses drawn from the classes among whom the use of hemp-drugs is chiefly prevalent. The Commissioners should state their opinion whether the prohibition of the use of hemp-drugs or any restrictive measures which they may deem practicable would be likely to give rise to political discontent in any parts of India or among any classes of the population. It is believed that in some parts of the country bhang is, in a special degree, the poor man's narcotic, and the possible unpopularity of a measure which would deprive the very poorest of the population of the use of a narcotic to which they have always been accustomed should not be overlooked.

8. Another point to which the attention of the Commissioners should be directed is the probability or possibility, that if the use of hemp-drugs is prohibited, those who would otherwise continue to use them may be driven to have recourse to alcohol, or to other stimulants or narcotics which may be more deleterious.

9. Finally, the Governor-General in Council requests that the Commissioners, if they should be of opinion that the prohibition of the consumption of any hemp-drug should not, or could not, be enforced, will indicate, for the consideration of the Government of India, any reforms and improvements which their investigations may lead them to recommend in the existing arrangements of each province for controlling the cultivation of the hemp plant, and the manufacture, sale, and taxation of hemp-drugs. In framing their recommendations regard should, of course, be had to the considerations which have been stated in paragraphs 7 and 8 of this Resolution. Absolute prohibition, or repressive measures of a stringent nature, may involve inquisitorial proceedings of an unpopular character, and afford opportunities for the levy of blackmail; and in framing regulations for the prohibition or for the restriction of the use of hemp-drugs these considerations should be borne in mind.

If the Commission should be of opinion that the cultivation of the hemp plant for the production of drugs, or the consumption of any hemp drug, should be absolutely prohibited, it will be their duty to state the regulations which should be adopted for this purpose.

10. All Local Governments and Administrations have been requested to render every assistance to the Commission, to collect and place at its disposal whatever information may be available, and to make to the Commission any suggestions regarding the enquiry which local knowledge and experience may suggest.

11. The Governor-General in Council directs that the Commission shall assemble in Calcutta on the 1st August 1893.

J. F. FINLAY,

Secretary to the Government of India.

BENGAL MEMORANDUM.

1. There is a uniform system throughout the Lower Provinces.

2. Hemp drugs, of which ganja is the principal, constitute one of the chief sources of excise revenue in Bengal.

3. In excise matters there is one central controlling authority, which is vested now in the Commissioner of Excise, acting under the general control of the Board of Revenue. The excise department of each district is managed by a selected Deputy Collector under the personal supervision of the Collector, who is primarily responsible for the administration of the excise of his district. In the more important districts there is a Special Deputy Collector mainly for excise work. With the appointment of a Commissioner of Excise under section 33 of the Bengal Excise Act, VII of 1878, from the 4th April 1889 the connection of Divisional Commissioners with excise ceased, but recently (from 1st April 1893) they have again been brought into touch with the department by executive arrangement, in accordance with which annual and other reports and proposals involving any change in principle and policy pass through them.

4. The Excise Commissioner is assisted in the work of inspection by two Deputy Collectors under the designation of Inspectors of Excise. The subordinate district agency consists of Superintendents, Deputy Inspectors, Sub-Inspectors, clerks, jamadars, and peons, who are variously employed in the management of central distilleries, in the inspection of shops, in the collection of revenue, and the compilation of statistics, and in the detection and prevention of excise offences, and who are controlled by the Excise Deputy Collector acting under the orders of the Collector.

Regulation II of 1793, section 7, and clause 10 of section 8.
Act II (B.C.) of 1866, sections 18 to 24.
Act IV (B.C.) of 1866, sections 35 to 41.

The system of excise on hemp-drugs is based on the Bengal Council Act, VII of 1878, and the Regulation and Acts noted on the margin, as well as on the Board's Excise Manual and the circulars issued by the Board from time to time.

5. The following sections or parts of sections of the Bengal Excise Act relate specially to hemp-drugs :—

4, 15, 16, 35, 54, 62, and 63.

The following Board's rules have special reference to those drugs :—

Sections XIX, XX, and XXI of the Board's Excise Manual, 1891.

6. The wild hemp plant is found in nearly every district, and it grows abundantly in several places. No ganja or charas is made from the wild plant, as the narcotic element, which is essential to the preparation of either drug, is entirely absent or very imperfectly developed in the uncultivated plant. But the green leaves of the wild plant are dried and, under the name of bhang, extensively consumed, especially in Bihar. The cultivation of hemp plants, except under a license, is strictly prohibited, so are unlicensed sales of hemp drugs, including bhang, and their unlicensed possession in any quantity in excess of 20 tolas. (In the case of charas and Garhjat ganja the limit is 5 tolas.) The use of untaxed bhang is general, and the facility with which bhang can be made from wild plants baffles all effort to bring it under adequate taxation. Most of the licensed shops are situated in the urban areas, but, excepting in about half a dozen districts, the townspeople also would seem to use untaxed bhang. For instance, in the Rajshahi Division not a single license is taken for the sale of the drug. It is also suspected that licensed shops do not always confine their business to the duty-paid drug. An attempt was made lately to get the wild plant extirpated with a view to bring the cultivation of bhang under proper control, if possible; but the plant grows so abundantly that the attempt was considered impracticable, and has since been abandoned under the order of Government. Although wild hemp is so very common everywhere, bhang is prepared for the market in only three districts, *viz.*, Monghyr, Bhagalpur, and Purnea, where the plant growing luxuriantly in the alluvial char lands of the Ganges is considered to yield a superior quality of leaves. Wholesale dealers are allowed to collect the leaves under permits granted by the Collector. They next bring the drug in bags to the licensed golas, where it is weighed and stored in the presence of a responsible officer. It is then allowed to be exported to other districts or issued for retail sale under the same rules as ganja.

7. It will be seen that bhang does not really come under excise control until it is collected and stored in golas, and the rules so far are defective. But the difficulty of introducing a stricter system lies in the fact that the plant, as it stands on the ground, has very little marketable value. If it is growing on waste land, any one can have it; on the other hand,

[redacted] whose land it is found is only too glad to get any one to remove this trouble-[redacted] all that the collector of the drug has to pay are wages for gathering and [redacted]eaves and cartage to the gola.

[redacted]ultivation of the hemp plant for the production of ganja is permitted under [redacted]s. Prior to the passing of Act II (B.C.) of 1876 persons engaged in the cultivation of ganja apparently were not required to take out licenses, though by section XXIII of Act XXI of 1856 the Board of Revenue were empowered to "place the cultivation, preparation, and store of the drugs under such supervision as may be deemed to be necessary to secure the duty leviable thereon," and by section L of the same Act the cultivators of ganja and bhang were prohibited from selling the drug to any one other than a licensed vendor or other duly authorized purchaser. Unlicensed cultivation was prohibited under section 13 of the Bengal Council Act, No. II, 1876. The same provision has been retained in section 54 of the present Act, VII (B.C.) of 1878, and every cultivator has to take out a license for which no fee is charged.

9. During the first half of the present century the district of Jessore was celebrated for its ganja, and large quantities of the drug were prepared there for the market. The cultivation in Jessore was entirely suppressed in 1875. Ganja is now cultivated in a compact tract of country with a radius of about 16 miles lying in three districts, *viz.*, Dinajpur, Rajshahi, and Bogra. The whole tract, though situated in three districts, is for the purposes of ganja administration, placed under the jurisdiction of the Collector of Rajshahi, who is styled the Superintendent of the Ganja Mahal, the Sub-divisional Officer of Naogaon, who is in immediate charge, being designated Deputy Superintendent. The cultivation and manufacture of ganja and its sale by cultivators are regulated by clauses 3 to 27, section XX of the Excise Manual, pages 154 and 158.

10. Any person who intends to cultivate the hemp plant for the purpose of making ganja must first apply in writing to the Sub-Deputy Collector at Naogaon, who is also the supervisor of the Ganja Mahal, for a license authorising him to cultivate. The license is ordinarily granted, unless there be any valid objection, and remains in force for one working season only.

Clause 3, section XX, Excise Manual.

Clause 4, section XX.

11. In February and March the supervisor or one of his three assistants visits each manufacturing yard or *chatter* as often as possible to take note of the outturn, and to see that the drug as manufactured is forwarded to the public gola or stored in some secure authorized place in the premises of the cultivators, or of such wholesale dealers as purchase the standing crop and prepare their own drug.

Clause 10, section XX.

12. The manufacturer of the drug, whether a cultivator or a wholesale goladar, is bound to give notice three days before he commences to cut his crop to the supervisor or to an assistant supervisor; the rule also requires him to send into the public gola all the ganja he manufactures, unless he has a secure private place of his own. But hitherto the rule regarding storage in the public gola has not been enforced owing to practical difficulties, and the cultivators have been permitted to keep the manufactured drug in their own houses. A cultivator has to obtain a license from the supervisor to retain ganja in his own private gola until it is disposed of to a licensed purchaser. This license shows the quantity and the kind of ganja covered by it, and has to be returned to the supervisor endorsed with the names of the purchasers to whom the ganja may subsequently be sold, and the quantity sold to each.

Clause 11, section XX.

Clause 12, section XX.

13. A cultivator may sell his standing crop to a duly licensed wholesale purchaser, but not without the written sanction of the supervisor of ganja cultivation. Every purchaser licensed to purchase ganja for export is bound to keep for the inspection of the supervisor, or other excise officer, a statement of his purchases and sales on pain of forfeiture of his license.

Clause 14, section XX.
Clause 25, section XX.

14. Owing to the area within which cultivation is permitted being extremely limited, and to the close supervision exercised there, there is every reason to believe that unlicensed cultivation has been all but suppressed. The manufacture of the drug entails a series of elaborate processes, and cannot be successfully carried on in secret, at all events to any appreciable extent, and it may be safely affirmed that the manufacture of ganja is now confined in these provinces to the very limited tract which has been specially set apart for the purpose. Isolated cases of one or two plants being grown in the inner courtyards of houses are occasionally detected, but these only show how effectually unlicensed cultivation has been put down.

15. But much remains to be done to bring the manufacture of the drug, and more especially its storage in private houses, under more effective control than is exercised at present. Manufacture begins almost simultaneously in every part of the tract, and it is physically impossible for the limited excise staff to visit the *chatters* or manufacturing yards with sufficient frequency and to check the outturn.

16. Again there is no Government monopoly in ganja as there is in op[illegible]vern-ment is not concerned with either the wholesale or the retail trade beyond see[illegible]at the drug pays duty before passing into consumption. The difficulty of having a public warehouse is that the ganja stored in it would consist of numerous small parcels, all belonging to different individuals, and this would lead to much confusion. Again, the drug has to be frequently aired, turned, and handled in order to keep it in good condition, and it is next to impossible to secure this periodical examination when the ganja is stored in public golas situated at a distance from the houses of the cultivators. It is mainly owing to these difficulties that cultivators have so long been allowed to keep the ganja in their own houses, but the so-called private golas are often mere open sheds, and are not the secure warehouses that the rules contemplate. A properly built gola would be beyond the means of the average cultivator. But even with suitable buildings there would be no security unless one key remained with a Government official, whose presence would then be necessary every time the gola had to be opened.

17. The present system of storage is admittedly defective, and it cannot be denied that some ganja is smuggled or otherwise illicitly disposed of. But owing to the comparatively bulky nature of the drug there is reason to think that the extent of smuggling is not large. The small number of cases detected also point to the same conclusion. The privilege of growing ganja is valued, and the cultivators, who are generally well-to-do men, are averse to doing anything that may cause forfeiture of their licenses, not to speak of other penalties; and it is the general opinion of those who have any experience of the ganja tract that the cultivators as a class honestly and faithfully carry out the engagements.

18. Garhjat ganja, as its name implies, comes from the Garhjat or Tributary States of Orissa, and is in use only in the three districts of the Orissa Division. Its cultivation and manufacture is apparently under no control. Small quantities of Garhjat ganja are imported into Puri under excise rules, but more is smuggled there as well as in the other two districts, the extended frontier and the jungly nature of the country affording great facilities for such illicit dealings and rendering detection extremely difficult.

19. The resin from which charas is manufactured is not produced in abundance in the plant in Bengal, and charas is not made here. It is obtained from Amritsar and Mirzapur, where again it is imported from Yarkand and other places in Central Asia. Charas used at one time to be imported from Nepal also, but the trade has apparently died out.

20. The importers of ganja and other hemp drugs are the wholesale dealers of those drugs. They are licensed.

As regards ganja the following procedure is observed :—

A licensed wholesale merchant or retailer of another district who wishes to purchase ganja from the cultivators has in the first place to apply for a pass to the Collector of his own district, which is granted on payment of a fee of Rs. 2. The pass having been granted, a duplicate of it is sent by the officer granting it by the same day's post to the Collector of Rajshahi, who on receipt of it prepares a license to purchase, and transmits it to the supervisor of the ganja cultivation at Naogaon for delivery to the purchaser. The license is granted subject to the condition that the purchaser shall, when he has made his purchases, collect the whole of the ganja in a place to be approved by the supervisor until it is ready for export. The importer on reaching the place of purchase has to give up to the supervisor the original pass granted to him by the Collector of his own district, and receives the license authorizing him to purchase. He then makes purchases and stores the ganja in the place approved by the supervisor. The ganja purchased for export is weighed, first without straw or covering, and then with the covering, and both the aggregate and net weights of each package are entered on the back of the license or permit and on the importer's original pass. The ganja is packed and sealed in bales or bags in the presence of the supervisor or one of his assistants.

Excise Manual, clause 27, section XX.

Clause 28, section XX.

Clause 29, section XX.

Choor ganja from which all the woody fibre has been removed is packed in bags only which are sealed on each seam and at the mouth. No small or detached twigs of ganja are inserted in the bundles of flat ganja, but any such twigs as may be detached in the process of preparation are made up into separate bales or bags and charged with the duty leviable on round ganja. When the drug purchased has thus been weighed, packed, and sealed and made ready for despatch, the supervisor returns to the exporting merchant the original pass after having endorsed on it all the particulars as regards the weight and number of bales, the name of the purchaser and of the charandar or person in whose charge and custody it is conveyed, the mode of conveyance by which the ganja is to be transported, the places, warehouses, or shops to which the transport is made and the period for which the pass is current. The supervisor at the same time sends the license or permit with the necessary entries endorsed on the back to the Collector of Rajshahi for entry of the weights on the duplicate pass, which is then forwarded to the Collector of the importing district. A report of these particulars is at the same time made by the supervisor to the Collector of Rajshahi, a duplicate of this report being forwarded by him by post to the

Clause 30, section XX.

Clause 31, section XX.

Clause 32, section XX.

Col[redacted]mporting district. Any ganja found on weighment by the supervisor to be in excess of the quantity entered in the import pass is kept in the public gola and warehouse, a rent of Re. 1 per maund being charged for the first month, and 4 annas per maund for subsequent months. This quantity is not allowed to be exported without a fresh import pass, but the cultivator may sell the same to other goladars.

Clause 33, section XX.

Siddhi or Bhang.—No person is permitted to purchase siddhi for export to another district or obtain siddhi for sale without a pass on payment of a fee of two rupees, and a license from the Collector of the district to which the siddhi is to be conveyed or in which it is to be stored. The pass and the license must be countersigned by the Collector of the district in which the siddhi is bought or obtained. Siddhi, whether obtained locally or imported from another district, must be stored in a warehouse in the same way as ganja is stored. A licensed wholesale merchant or retailer of another district who wishes to purchase siddhi in the producing district is bound to purchase it from the wholesale dealer of that district in the same manner as ganja is purchased. But when he wishes to obtain his supplies from any local fields or places where the siddhi-yielding plant grows wild, he is allowed to do so in the presence of an excise officer deputed by the Collector for the purpose. Such officer is bound to weigh the drug before it is removed, and to report to the Collector its weight, condition, quality, &c. As a matter of fact, however, wholesale dealers of other districts always obtain their supplies from the licensed golas of Monghyr and Bhagalpur.

Clause 6, section XIX.

Clause 7, section XIX.

Clause 8, section XIX.

21. *Charas.*—No person is allowed to import charas into Bengal excepting under a pass from the Collector of his district. No fee is required for the pass. The importing merchant on arrival presents the pass to the Collector of the exporting district, who returns it to him after endorsing on it the quantity of charas to be imported; similar entries are made by him on the back of the duplicate copy of the pass sent to him by the Collector of the importing district, and it is then returned direct by post. When charas is imported from Nepal the pass need not be endorsed except in the importing district.

Clause 1, section XXI.

The charas, on its arrival in the district from which the pass was issued, is produced for examination and comparison with the pass before the Excise Deputy Collector. The whole consignment is liable to confiscation, and the importer is liable to other penalties of the Excise law for each of the following offences:—

Clause 2, section XXI.
Clause 4, section XXI.

(1) Selling any portion of a despatch before arrival at the Collectorate from which the pass was given.

(2) Being in possession of a quantity greater or less than that shown to be the quantity covered by the pass, unless the difference is fully explained and full duty paid.

22. *Garhjat ganja.*—Any licensed wholesale or retail vendor of ganja wishing to purchase Garhjat ganja from the cultivators in the Tributary Mahals has to apply to the Collector of his own district for a pass, stating the locality or localities and the Tributary State in which the ganja is to be purchased and the quantity for which the pass is required. It has lately been ordered by the Board as an experimental measure that the sources of export of Garhjat ganja should be confined to those States which are under the immediate control of Government.

Clause 65, section XX.

Board's No. 1618-B., dated 11th September 1893.

A pass is granted for any quantity not less than one maund on payment of a fee of Rs. 2. A duplicate copy of such pass is sent to the Superintendent of the Tributary Mahals, who issues instructions to such authorities as may be subordinate to him in the specified locality or localities to superintend the weighment, packing, sealing, and despatch of the drug. The local authority, on production of the pass as aforesaid, weighs the ganja, superintends its packing, and seals the bales or bags in which it is packed in such a manner that they cannot be opened without breaking the seals.

Clause 66, section XX.

Clause 67, section XX.

When the bales are ready for despatch, the local authority returns the original pass to the importer after endorsing on it the locality in the Garhjat Mahals from which the ganja is transported, the weight and number of the bales or bags of ganja transported, the distinguishing marks by which the bales or bags may be known, the name of the purchaser and of the person in whose charge and custody it is conveyed, the mode of conveyance, the route to be taken, the point of crossing the frontier and such other particulars as he may think it desirable to note. He is required to submit at the same time a copy of the endorsement to his immediate superior. Every pass must be surrendered to the Collector of the importing district or to the sub-divisional officer (if the ganja is consigned to a

Clause 68, section XX.

Clause 69, section XX.

sub-division) within three days of the expiration of the period of its currency. After crossing the British frontier, the importer is bound to take the consignment to the first police-station for inspection. The importer is not authorized to make sales during the journey, and any police or excise officer may challenge and examine consignments during transit. The rules as to storage and levy of duty on Rajshahi ganja apply *mutatis mutandis* to Garhjat ganja.

Clause 71, section XX.

Clauses 70 and 72, section XX.

Clause 73, section XX.

Clause 74, section XX. Any vendor licensed to retail Rajshahi ganja may sell Garhjat ganja under the same license.

23. Both the wholesale and retail dealers are under control and are licensed. The wholesale licenses are granted free and the retail licenses are annually sold by auction.

24. Before ganja is allowed to be stored in a warehouse the Excise Deputy Collector of the importing district, or where the gola is situated in a sub-division, the sub-divisional officer, is required to ascertain by personal inspection of the consignment that the seals of the bales or bags are unbroken, and that the weight and sorts correspond with the weight and sorts noted on the pass given in the producing district. He opens some of the bags, and having ascertained that they contain flat, round, or choor ganja as invoiced, reseals them. He examines the general quality and the condition in which the drug is received, whether dry or damp or in process of deterioration or decay. If any of the particulars do not agree with the entries in the pass under which the ganja is imported, the circumstance is reported to the Collector. The full duty, at the rate chargeable on the sort of ganja in which the deficiency or defect is found, is at once levied on any deficiency of weight and on any broken bundles. Any bale or bag received without the original seal may, if the Collector thinks fit, be confiscated. A wholesale dealer can sell ganja only to another duly authorized wholesale dealer, or to a retail dealer duly licensed. Stock is taken annually in each ganja and siddhi warehouse between the 25th and 31st March at the head-quarters of the district by the Excise Deputy Collector, and at the sub-divisions by the sub-divisional officer. The ganja and the siddhi goladars are held responsible for any deficiency in excess of 2½ per cent., and duty is levied on such excess on or before the 31st March of each year. Each warehouse is secured by two reliable locks, the key of one of which remains with the goladar, and that of the other with the officer in charge of the warehouse. No gola can, therefore, be opened except in the joint presence of the goladar and the officer in charge.

Clause 43, section XX, Excise Manual.

Clause 51, section XX.

Clauses 52 and 53, section XX.

Clause 55, section XX.

25. Every importer of charas is bound to keep an account of the quantity received and expended, and if he wishes to dispose of the drug to the public, he must take out a separate license for retail vend.

Clause 5, section XXI.

26. Ganja and siddhi golas are liable to periodical inspection by the Collector, the Excise Deputy Collector, and the sub-divisional officer. The inspecting officer is required to test the stock in hand and to examine the ganja registers and the treasury receipts to ascertain that the duty has been properly levied on all ganja issued, and finally that the collections have been duly credited to Government.

Clause 75, section XX.

27. Retail licensees are bound to act according to the excise law and rules, and licenses are granted to them under certain conditions, which they must observe on pain of forfeiting the license.

(*Vide* forms of licenses Nos. 63, 116, and 124, pages 267, 312, and 318, respectively of the Manual.)

28. Retail shops are also liable to inspection by Excise officers. Retail vendors pay duty according to the prescribed scale at the time of obtaining their supplies from the golas, and the drug is issued in the presence of a responsible officer (generally a gazetted officer), and the consignment is protected by a pass during its transit from the gola to the licensed shop.

29. The excise revenue from ganja and other hemp drugs is levied in two ways, *viz.*, (1) in the form of license fees, and (2) in the form of duty at a fixed rate per seer on the quantity issued for retail vend.

30. *License fees.*—For some time prior to 1860, no fee was taken on licenses for the retail sale of ganja. Duty only was charged at the rate of Re. 1 per seer. During the year 1860-61 a fee was imposed on licenses for the retail vend of ganja, and licenses were issued at a fixed rate of monthly fees till the introduction of the auction system in 1876.

Excise Report, 1860-61, paragraph 39.

Licenses are now put up to auction and sold to the highest bidder at or above the upset fee. The term of a license is one year, except in Calcutta, where it is three years. The Sadar Excise Deputy Collector

Clause 14, section III.

generally presides at the annual auction sales. A shop is put up to auction at an upset price approved by the Board. In the event of the upset price not being obtained in any particular case, a lower offer may be accepted with the sanction of the Commissioner. A sum equivalent to the fee for two months is taken at the time of sale as advance fees, and one month's fee is paid on the date on which the currency of the license commences, and one month's fee on the first day of every succeeding month until the whole of the fee due on the license has been realized. In cases of siddhi, charas, and majum (a sweet preparation of siddhi) shops, however, only one month's fee is taken in advance.

Clause 21, section III.

Clauses 23 and 24, section XI.

A brief account of the earlier laws and rules for regulating the sale of hemp drugs is given in Appendix A.

31. *Duty.*—The different rates of duty on ganja, bhang, and charas levied from time to time are given in paragraphs 36—38. No duty is levied separately on majum as duty is paid on the siddhi used in its preparation.

The present rates of duty as well as those that will come into force from 1st January 1894 on different sorts of ganja and bhang and charas are shown below:—

	Present.	Rate per seer from 1st January 1894.
	Rs. A.	Rs. A.
Ganja, choor	8 0	9 0
„ round	7 4	7 8
„ flat	6 0	7 4 (small twigs).
		6 0 (large „).
„ Garhjat	3 8	3 8
Charas	8 0	8 0
Bhang	0 8	0 8

In the Orissa Division, however, owing to the competition of Garhjat ganja, the duty on different sorts of the Rajshahi ganja is leviable at the following reduced rates:—

	Present.	Rate per seer from 1st January 1894.
	Rs. A.	Rs. A.
Choor	6 8	7 8
Round	6 0	6 4
Flat	4 8	4 8

32. *Exportation of ganja.*—Exportation from the producing district, or from one district to another, or from one licensed warehouse to another in the same district by wholesale vendors is allowed without prepayment of duty within the Lower Provinces of Bengal or Assam, as, according to the system in force in these provinces, duty is levied on the drug as it passes into the hands of the retailers.

Clause 39, section XX.

But before the exportation of ganja is allowed to foreign territory or to any district not within the Lower Provinces of Bengal or Assam, full duty is levied in the exporting district. Ganja when exported by sea to a country beyond the boundaries of British India is not liable to duty, and rebate is allowed on proof of export.

Clause 40, section XX.

Licensed retail vendors are required to pay duty at the prescribed rate before removing the ganja from the wholesale dealer's warehouse. The duty is calculated upon the actual weight of the drug issued.

Clause 60, section XX.
Clause 61, section XX.

33. *Siddhi.*—Duty is realized on siddhi in the same way as on ganja. A retailer, when he applies to supply himself locally, is required to prepay the duty on the quantity applied for.

Clauses 7 and 9, section XIX, Excise Manual.

34. *Charas.*—Duty on charas is levied at the rate of Rs. 8 per seer, of which one-half is levied at the time of taking out the pass for the importation of the drug. The payment of the second moiety is made on the arrival of the drug in the district in which it is to be sold or stored, as the case may be.

Clause 3, section XXI, Excise Manual.

35. To provide against evasion of payment of duty as regards ganja and siddhi, the following precautions are taken:—

(1) The warehouse must have only one door, which is secured by two locks, one of which at least is Chubb's; the key of one is kept by the owner, and that of the other, which must be Chubb's, by the excise officer in charge of the warehouse.

Clause 46, section XX, Excise Manual.

(2) No delivery of the drugs is made except in the presence of an excise officer (generally a Deputy Collector), and under an order from the Collector or from an officer duly authorized by the Collector to grant passes, and no pass is granted until the full amount of duty has been levied, as evidenced by the treasury chalan.

(3) A ticket is attached to each bale or bag showing the actual quantity contained in it, and whenever ganja is taken out of a bag, the quantity so taken out is noted on the ticket and the balance struck after each transaction. These entries are made by the officer issuing the drug and initialled by him.

(4) The gola licensee is not allowed to sell any quantity of ganja by retail vend under his license.

(5) The goladar is bound to give access to the store whenever required by the excise officer in charge or his official superior.

Besides, as already stated, at the end of each year stock is taken of the quantity of ganja or siddhi in the gola by the Excise Deputy Collector or the sub-divisional officer, as the case may be, and duty is levied on all deficiency in excess of 2½ per cent.

Clauses 52—55, section XX, Excise Manual.

36. *Rates of duty on Rajshahi Ganja from 1853—*

Kinds of Ganja.	From 1853 to December 1859.	From December 1859 to February 1864.	(a) From February 1864 to 1871-72.	(b) From 1872-73 to 1877-78.	(c) From 1878-79 to 1881-82.	(d) From 1st April 1882 to 31st July 1887.		(e) From 1st August 1887 to 31st December 1887.		(f) From 1st January 1888 to 19th September 1889.		(g) From 20th September 1889 to 31st March 1891.		(h) From 1st April 1891 to 21st March 1893.		(i) From 22nd March 1893 up to the present date.	
	Re.	Rs.	Rs.	Rs. a.	Rs. a.	Rs. a.	*Rs. a.*	Rs. a.	*Rs. a.*	Rs. a.	*Rs. a.*	Rs. a.	*Rs. a.*	Rs. a.	*Rs. a.*	Rs. a.	*Rs. a.*	Rs. a.	*Rs. a.*
Choor ...	...	...	4	4 0	4 0	5 0	*4 0*	6 8	*4 0*	6 8	*5 0*	7 0	*5 8*	7 0	*5 8*	8 0	*6 8*
Round ...	...	...	3	3 0	4 0	5 0	*4 0*	6 4	*4 0*	6 4	*5 0*	6 4	*5 0*	6 4	*5 0*	7 4	*6 0*
Flat ...	1	2	2	2 8	3 8	4 8	*3 8*	4 8	*3 8*	4 8	*3 8*	4 8	*3 8*	5 0	*3 8*	6 0	*4 8*

Note.—The figures in *italics* show the different rates of duty sanctioned for the Orissa Division since April 1882.

(a) Board's Circular Order No. 14 of May 1884.
(b) ,, ,, No. 8 of November 1871.
(c) ,, ,, No. 6 of January 1878.
(d) ,, ,, No. 10 of ditto 1882.
(e) ,, ,, No. 9 of August 1887.
(f) Board's Circular Order No. 24 of February 1888.
(g) ,, ,, No. 7 of September 1889.
(h) ,, ,, No. 60-B., dated 10th December 1890.
(i) ,, ,, No. 15 of March 1893.

Duty on Garhjat Ganja.

	Rs.	A.	
Duty before 1st January 1877 (*a*) ...	0	8	per seer.
,, raised on 1st January 1877 (*a*) ...	1	0	,,
,, raised in December 1878 (*b*) ...	4	0	,,
,, fixed from 1st January 1891 (*c*) ...	2	8	,,
,, raised from 1st April 1893 (*d*) ...	3	8	,,

(*a*) *Vide* paragraph 139 of the Excise Report for 1876-77.

(*b*) *Vide* paragraph 98 of the Excise Report for 1878-79.

(*c*) *Vide* Board's Circular Order No. 14 of January 1891.

(*d*) *Vide* Board's Circular Order No. 7 of July 1893.

Garhjat ganja is not manufactured with as much care as Rajshahi ganja. It contains more leaves and seeds and less resin, and is much inferior to the Rajshahi drug in quality. A lower rate of duty is, therefore, fixed on it. It is only of one variety—flat.

37. *Duty on charas.*—The duty was fixed at Rs. 8 per seer under Government order, No. 3347, dated the 25th October 1880, referred to in paragraph 104 of the Excise Report for 1880-81.

38. *Duty on siddhi or bhang.*—It appears from paragraph 123 of the Excise Administration Report for 1874-75 that a duty of 4 annas per seer was levied in Calcutta in that year for the first time. It further appears from paragraph 82 of the Excise Report for 1879-80 that a duty of 8 annas per seer was fixed on siddhi from 1st April 1879 for the entire province.

39. The number of retail licenses for the sale of hemp-drugs is determined according to the *bonâ fide* demand of the drug at a place. This may be regarded as the guiding principle in opening a new shop. But the vast majority of the shops are of old standing, and the question in recent years has been one rather of elimination than of augmentation. In 1873-74 the number of ganja shops was 4,398, while in 1892-93 it was only 2,672. The object that the department has kept steadily in view is to do away with unnecessary places of vend. There is no fixed rule based on area or population, as the demand varies largely in different districts and in different parts of the same district. In December every year the Collector decides the number and sites of retail shops to be licensed during the next official year. As a rule no new shop is allowed to be opened unless there is a sufficient demand for the drug at the locality. An upset price is fixed as regards each license, based generally on the average fees paid in the last three years, any increase or decrease in sales being also taken into consideration. The Collector's proposals are reviewed and finally sanctioned by the Commissioner with the approval of the Board of Revenue. All the licenses are sold by public auction in March for the ensuing year.

40. As regards sites local opinion is not formally consulted, but attention is paid to any reasonable objection raised against any particular site, though most of the sites being old ones, it is seldom that they are objected to. Moreover, shops for the sale of hemp-drugs are not considered a nuisance, and are often accommodated in the same room where other business is carried on.

41. No rate is fixed at which any of the hemp-drugs must be supplied by wholesale to retail vendors. The retail price of each of the drugs varies considerably in different districts. The average retail price of each is shown below :—

	Rs.	A.	
Ganja	20	0	per seer.
Siddhi	2	8	„
Charas	40	0	„
Majum	3	0	„

42. The retail selling price of each of the drugs in the following districts is shown below :—

Names of Districts.	Retail selling price per seer.			
	Ganja.	Siddhi.	Charas.	Majum.
	Rs.	Rs.	Rs.	Rs.
Dacca	16	3-12	40	3
Mymensingh	16 to 25	3	...	...
Rajshahi	25	...	...	...
Purnea	14 to 20	...	...	...
Bhagalpur	12-8 to 20	1-8	...	...
Calcutta	12 to 16	1-12 to 2	35 to 40	2-8 to 4
Burdwan	20	2-4 to 2-8	36	...
Patna	12	1	...	...
Muzaffarpur	15 to 18	1	...	...
Lohardaga	15	5	...	...
Cuttack	12 to 16	5 to 6	...	...
Chittagong	12 to 18	3	...	...

43. Yes, a maximum amount is fixed for retail sales to, and possession by, the ordinary consumer, as regards each of the articles as shown below :—

Section 15 of Act VII (B. C.) fo 1878.

Rajshahi ganja, siddhi, and majum or any preparation or admixture of the same, one quarter of a seer (20 tolas); Garhjat ganja (5 tolas experimentally); charas or any preparation or admixture of the same, 5 tolas.

No minimum price is fixed for any of these drugs.

44. A statement is given below showing the number of ganja cases during 1892-93 :—

Nature of offence.	1892-93. No. of persons.	
	Arrested.	Convicted.
Smuggling of ganja or siddhi	90	83
Illicit cultivation of ganja or siddhi...	86	71
Unlicensed sale of ganja	154	128
Illicit possession of ganja	77	64
Total ...	407	346

Of the 90 arrests shown under the head of smuggling, no less than 80 were made in Puri. Of the remaining 10, 5 took place in Bhagalpur, 4 in Dinajpur, and 1 in Shahabad. These figures give a fair indication of the extent of smuggling as also of the localities where it prevails. Some ganja is smuggled from Nepal into the districts bordering on that State, but the evil is not widespread, and does not appreciably affect the revenue. The drug is of inferior quality, so much so that considerable quantities of duty-paid Rajshahi ganja is annually exported to Nepal from the North Gangetic districts.

Garhjat ganja, on the other hand, is largely smuggled into Orissa. The drug is in great demand with the priests of the famous shrine of Juggernath, and is affected by the attendants of other Orissa temples. It is usually brought in small quantities by pilgrims, mendicants, and others as an acceptable offering to the priests. The offence is most rife in Puri, and also prevails in Cuttack and Balasore, though no cases were reported from either district in the past year.

There are thus two distinct sources of illicit supply—Nepal and the Garhjat States of Orissa. The extent of smuggling from Nepal is small, and no special measures are taken

to check it; in fact none could be effectively taken, regard being had to the length of the frontier to be guarded.

Various attempts have from time to time been made to stop smuggling from the Garhjat and with varying success.

The chief difficulty lies in bringing the excise administration of these petty States under some sort of control. Some of them are now under the direct management of Government, owing to the minority of the Chiefs or other causes, and it is in contemplation to make a beginning with them.

In 1878 cultivation of ganja was prohibited within three miles of the frontier, and this was followed by a considerable increase in the consumption of the Rajshahi drug in all the three districts. The order was withdrawn in 1889, and consumption has since decreased considerably in Cuttack, though this result is not so apparent in Balasore or Puri.

At one time the importation of Garhjat ganja or siddhi was entirely forbidden (*vide* notification of 21st June 1882), but this is now allowed (*vide* notification of 23rd March 1892) under separate rules framed for the purpose, though little advantage has yet been taken of them to import the Garhjat drug. With a view specially to prevent smuggling, the limit of possession of Garhjat ganja has been experimentally reduced to 5 tolas.

45. Arrests for illicit cultivation were made in 25 districts, but all the cases were for growing a few plants (very often only a single plant) in the courtyards of houses more for the purpose of using the leaves as bhang than for manufacturing ganja, and the fact that not a single case occurred in Dinajpur, and only one in each of the districts of Rajshahi and Bogra, shows clearly that unlicensed cultivation for the manufacture of ganja is all but unknown even in the ganja tract.

46. Similarly, cases of unlicensed sale of ganja, though comparatively numerous, generally represent sales of the excised drug by petty dealers who obtained their supplies from licensed vendors, and are often the outcome of the licensed shops being too few to supply the local demand, or, in other words, these unlicensed men distribute the drug to a larger circle of consumers. This is particularly the case in the Dacca Division, where the consumption of ganja is large and where nearly a third of the arrests were made.

47. Nearly half the arrests for illicit possession were made in the Rajshahi Division, and of these all but two occurred in the three ganja-growing districts. In these cases the ganja was doubtless obtained clandestinely from the cultivators, but the quantities seized were not large.

48. It may be said generally that, except in Orissa, where there is smuggling of Garhjat ganja, in some of the north Gangetic districts, where Nepal ganja is introduced, and in the immediate neighbourhood of the ganja tract, where there is some consumption of untaxed ganja, in the rest of the province most of the drug consumed has paid duty, and that the majority of the cases of illicit cultivation and unlicensed sale do not mean any serious threat to the revenue.

The police and the excise detective staff are encouraged in their efforts to put down excise offences by the grant of liberal rewards in all important cases of seizure.

49. No material modifications of the present system are actually under consideration at the present moment.

The question of bringing the excise of the bordering Garhjat States in Orissa under some control so as to protect our own revenue, more especially with reference to the smuggling of Garhjat ganja, has been for some time under consideration.

50. *Column 3.—Area under ganja cultivation.*—It will be observed that, except in the past year, there has been no material increase in the area under ganja cultivation during the last twenty years. The column shows the quantity of land in which the crop finally matured, excluding such land as was cultivated, but in which the plants failed altogether, and therefore, although it would appear that cultivation was greatly curtailed during the years 1875-76, 1878-79, 1879-80, 1885-86, and 1891-92, this was not really the case in all the years excepting 1885-86, as the plants on large areas under cultivation were destroyed in those years by heavy floods, and such lands were not taken into account. The decrease in the area cultivated in 1885-86 was due to the smaller profits of the cultivators in the preceding two years. The high price which the drug had realized in 1891-92 owing to wholesale failure of the crop in the previous year, caused by inundation, induced a large number of raiyats to take up lands for ganja cultivation during the following year. Some raiyats are regular growers of ganja and annually set apart a portion of their holdings for the purpose; others are induced to take to ganja cultivation by the high profits of one year, to abandon it again when prices fall.

51. *Columns 4, 5, 7 and 8.*—These columns are blank, as no land is cultivated for the production and manufacture of bhang and charas in these provinces.

52. *Column 6.*—In this column the number of raiyats engaged in ganja cultivation, and not the number of licenses issued, has been shown. Cultivation did not require a license before the year 1876-77, when licenses were for the first time introduced under section 13 of Act II (B.C.) of 1876. Each cultivator has to take out a separate license.

53. *Columns 9, 11 and 12.*—These columns are blank except for 1878-79. Ganja and bhang are not as a rule imported from any other province. It, however, appears from the

Board's Excise Administration Report for the year 1878-79, from which extracts are given below, that ganja was actually imported during that year from Bombay and the Central Provinces :—

Paragraph 89, Excise Report, 1878-79.

"During the year under report 10 maunds of flat choor ganja were for the first time imported into Calcutta from Bombay under a pass granted by the Excise Superintendent. The Commissioner states that the Bombay drug, though good-looking, is less narcotic than Rajshahi ganja, and has not therefore come into much repute on this side of India." As regards the Nimar ganja imported, it is stated as follows :—

Paragraph 96, Excise Report, 1878-79.

"In consequence of short supply of ganja from Rajshahi, 8 maunds of Nimar ganja were imported into Monghyr from the Central Provinces and 32 maunds 34 seers of the same description of ganja were brought into Shahabad by a dealer. Of the latter quantity, 17 maunds 25 seers were sold locally, and the balance at Monghyr. The ganja produced in Nimar is inferior in quality to Rajshahi ganja, and does not meet with ready sale. Its wholesale price is cheap. On importation into Bengal, it is dealt with like Rajshahi ganja, and duty on it is levied at the rate of Rs. 4 per seer."

54. *Column 10.*—No information as regards the quantity of charas imported can be furnished prior to the year 1880-81, when a duty of Rs. 8 per seer was for the first time imposed on this drug under Government order No. 3347, dated the 25th October 1880. Before this year charas used to be imported free, and apparently no account of the quantity imported was kept. This remark also applies to the figures in columns 33 and 43.

Vide paragraph 104 of the Excise Report for 1880-81.

55. *Column 13.*—Complete information for this column is not available. The figures for the first four years show only exports to the North-Western Provinces, as exports to other places were not separately shown in the reports of those years. Similarly, the figures for some succeeding years represent exports to North-Western Provinces and Assam only. The figures for the last few years only represent the quantities exported to North-Western Provinces, Assam, Kuch Bihar, and Nepal.

56. *Columns 14 to 16.*—No information.

57. *Columns 17 to 21.*—Wholesale vendors who are the goladars pay no license fees, and their number is not reported.

58. *Columns 22 to 26.*—It will be observed that the number of licenses for the retail sale of ganja, charas, and majum has fallen off appreciably, while there has been very little fluctuation in the number of licenses issued for the retail sale of bhang. The number of ganja retail licenses issued in 1873-74 was 4,398, while 2,672 licenses only were issued in 1892-93, the average license fee being Rs. 55 and Rs. 413 respectively. The largest reduction in number was made in 1875-76 : since then there have been considerable fluctuations, but the object steadily aimed at has been to keep the number down as much as possible.

59. *Columns 27 to 31.*—In spite of the great falling off in the number of licenses, the revenue from license fees has remarkably expanded—that from ganja licenses from 2½ lakhs of rupees to 11 lakhs, that from charas licenses from Rs. 3,000 to Rs. 5,000, and that from bhang licenses from Rs. 13,000 to Rs. 33,000. The fees derived from majum licenses, however, show no improvement, but rather a slight decrease owing doubtless to a falling demand. The total license fees show an increase of nearly 9 lakhs of rupees, or 340 per cent.

The great increase in ganja license fees in 1875-76 and subsequent years was due to the introduction of the auction system and to keen competition at the time of settlement. In recent years much care has been bestowed in fixing the upset fee of each shop, so as not to leave everything to the chances of auction.

The sudden increase of revenue on account of license fees for charas shops in 1880-81 was owing chiefly to the better settlement of shops in Calcutta on account of an increased demand for the drug, and to the opening of 14 new shops in the district of Shahabad. It will be seen that the imposition of a duty of Rs. 8 per seer in 1880-81 seriously affected the total revenue : it decreased till the year 1884-85, from which time there was a slow, though steady, increase till 1889-90, followed by a rapid rise in the past three years.

The rate of duty on ganja has been several times enhanced since the year 1873-74, and this with the augmented license fees has caused a decrease in consumption from 8,125 maunds in 1873-74 to 5,451 maunds in 1892-93 ; but the duty receipts have risen from Rs. 8,36,355 in 1873-74 to Rs. 12,80,631 in 1892-93. The great increase under the head of license fees has already been noticed. It is satisfactory to note that though the consumption of ganja has been reduced in 20 years by nearly one-third, the total revenue has during the same period been more than doubled. The taxation on each seer of ganja was represented in 1873-74 by license fee Rs. ·7 plus duty Rs. 2·5 = Rs. 3·2, while the figures for 1892-93 are —license fee Rs. 5 plus duty Rs. 5·8 = Rs. 10·8, or a rise of more than 3½ times. In view of the above facts it may be justly claimed for the department that the administration of excise on ganja has fully realized the principle of a maximum of revenue with a minimum of consumption.

The consumption of charas shows a large increase, though the quantity is still small, and it will be necessary ere long to raise the duty on it. The rate is the same as for choor ganja, while the proportion of narcotic matter is much larger in charas.

The great increase in the consumption of bhang is more apparent than real, and is due to larger use of the duty-paid drug.

60. The importance of hemp-drugs in these provinces will be apparent from the fact that out of a total excise revenue of 115 lakhs in 1892-93, ganja and its congeners contributed 24¼ lakhs, or about 21 per cent., and occupy the second place, being next only to country spirits. Of the four varieties that are taxed, ganja, bhang, charas, and majum, ganja alone yielded more than 23¾ lakhs. The revenue from majum, a sweet preparation of bhang in the form of confection, is insignificant, being under Rs. 2,000. The consumption of majum is practically confined to Calcutta, Patna, and Cuttack. The revenue from charas was under Rs. 10,000. It is consumed in the urban areas of a few districts in Central and Western Bengal. The revenue from bhang exceeded half a lakh. Its consumption is general, and the quantity (1,034 maunds) that paid duty represents but a small fraction of what was illicitly consumed.

61. The cultivation and manufacture of Rajshahi ganja that not only supplies the Lower Provinces, but is also exported to Assam, Nepal, North-Western Provinces, &c., is confined to a small well-marked area. It is a paying crop, and a year of good prices usually leads to extended cultivation in the next. From the time the drug is brought to the Naogaon head office, to be weighed, packed, and despatched to the consuming districts, the safeguards against fraud provided by the existing rules appear to be ample, and it may be safely affirmed that there is little room for evasion of duty during transit or in the subsequent stages, including storage in golas, issue to retail vendors and sale to consumers. There is likewise good reason to think that there is no unlicensed cultivation, and that no ganja is made for the market outside the recognized tract.

62. The weak points of the system may be said to be all connected with the process of manufacture and the storage of the drug in private golas prior to disposal to wholesale dealers. Manufacture begins simultaneously at different places, and its progress is not watched as closely as it ought to be. The outturn is not checked then and there, but a rough estimate is subsequently made by merely counting the number of bundles of each sort, which can hardly supply the place of an accurate weighment. Then the drug is stored in private houses, in mere sheds which are sometimes open and always insecure, and there is ample opportunity for petty pilfering by outsiders, even supposing the cultivators were all above suspicion.

63. The difficulty of working a scheme of public golas without a Government monopoly has been adverted to under section (*c*). In the case of opium the cultivator sells his produce outright to Government at a fixed price and has no further concern with it. The entire quantity purchased from the different cultivators is dealt with as one stock. In the case of ganja, however, the drug remains the cultivator's property and in his charge until he disposes of it to a licensed purchaser. It has therefore been found impracticable to introduce public warehouses where all the drug could be stored immediately after manufacture. In view of the attacks made against the Government monopoly in opium, it is not likely that any proposal to establish a similar monopoly in ganja would be received with favour. But with a larger establishment the existing checks on manufacture might be rendered more effective.

64. Four sorts of ganja are now made, flat large twigs, flat small twigs, round, and choor, and these distinctions are observed for the levy of duty and for the purposes of the wholesale trade but no twigs or woody matter are taken by the retail purchaser, and for retail sale the other varieties are also reduced to choor by the retail vendor. It would therefore be a good plan to have only one sort and abolish flat and round. Particular localities are said to favour particular sorts, but the fact that the consumption of choor increased very largely (from 424 maunds to 1,369 maunds) during the past year owing to the discovery that it was more lightly taxed in proportion to the amount of narcotic matter present in it, would seem to show that there can be no great objection to its general adoption. To the wholesale dealer this would reduce cost of carriage and save storage room; to Government it would simplify accounts, and remove all chances of fraud to revenue for which differential rates afford some room.

65. The cost of daily average allowance of ganja is 3 to 6 pies, while the cost of liquor to the habitual consumer is much higher. The cost of liquor is almost prohibitive to the poorer classes in Eastern and Central Bengal, but even in Bihar, where liquor is cheap, the daily cost is seldom less than 9 to 12 pies. In this view ganja may be said to be insufficiently taxed. Competition, however, is annually raising the license fees, and the duty is also enhanced from time to time.

66. Under the present system the wholesale dealers (goladars) make very large profits in some districts. They pay no license fees and combine to create a monopoly. It would perhaps be a better plan to recognize the monopoly, but to obviate its evil effects by fixing a maximum price for sales to retail vendors. Government might also appropriate a portion of the profits by giving the wholesale license for a given area to the person who agreed to pay the largest amount for each seer sold, in addition to the duty.

CALCUTTA;

The 27th November 1893.

K. G. GUPTA,

Commissioner of Excise, Bengal.

Statistics relating to Hemp Drugs in the Lower

Year.	Total population.	Cultivation of hemp plant for narcotics.						Amount of imports from other provinces in maunds and seers.				Amount of exports to other provinces in maunds and seers.				Number of licenses for wholesale vend.					Number of licenses for retail vend.				
		Area under cultivation.			Licenses for cultivation.																				
		Ganja.	Charas.	Bhang.	Ganja.	Charas.	Bhang.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant (majum).	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant (majum).	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant (majum).	Total.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant (majum).	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
		B.						Mds. s.	Mds. s.			Mds. s.													
1873-74 ...	Not known.	2,407	...	...	2,410	...	...	...	...	...	...	591 17	...	...	...	...	...	...	...	...	4,398	74	293	79	4,844
1874-75 ...	Ditto.	2,278	...	...	2,003	...	...	...	...	...	...	632 15	...	...	...	...	...	...	...	...	4,394	65	276	75	4,810
1875-76 ...	60,398,117	1,290	...	...	1,269	...	...	...	...	...	...	633 6	...	...	...	...	...	...	...	...	3,340	64	250	80	3,734
1876-77 ...	60,398,117	1,816	...	...	1,908	...	...	...	...	...	...	743 26	...	...	...	...	...	...	...	...	3,128	64	248	70	3,510
1877-78 ...	60,415,224	2,102	...	...	1,877	...	...	...	...	...	...	1,561 32	...	...	...	...	...	...	...	...	3,247	65	273	76	3,661
1878-79 ...	60,432,487	1,446	...	...	1,308	...	...	50 34	...	...	...	568 17	...	...	...	...	...	...	...	...	3,244	61	277	72	3,654
1879-80 ...	60,486,398	1,388	...	...	1,493	...	...	...	...	...	...	964 24	...	...	...	...	...	...	...	...	3,210	68	237	67	3,582
1880-81 ...	65,958,258	2,235	...	...	2,075	...	...	...	0 17	...	...	948 2	...	...	...	...	...	...	...	...	3,411	100	263	63	3,837
1881-82 ...	66,589,859	2,861	...	...	2,301	...	...	...	3 5	...	...	1,037 28	...	...	...	...	...	...	...	...	3,488	94	257	64	3,903
1882-83 ...	66,589,859	1,991	...	...	1,739	...	...	...	1 36	...	...	1,043 15	...	...	...	...	...	...	...	...	3,271	69	255	55	3,650
1883-84 ...	66,589,859	2,494	...	...	1,973	...	...	...	2 29	...	...	1,545 20	...	...	...	...	...	...	...	...	3,298	55	259	58	3,670
1884-85 ...	66,589,859	2,014	...	...	1,525	...	...	...	1 24	...	...	1,370 14	...	...	...	...	...	...	...	...	3,196	36	258	58	3,548
1885-86 ...	66,589,859	1,861	...	...	1,036	...	...	...	2 15	...	...	1,446 14	...	...	...	...	...	...	...	...	3,033	34	257	58	3,382
1886-87 ...	66,591,453	2,191	...	...	2,333	...	...	...	3 32	...	...	1,677 28	...	...	...	...	...	...	...	...	3,046	21	265	62	3,394
1887-88 ...	66,703,481	1,780	...	...	1,942	...	...	...	4 35	...	...	1,673 9	...	...	...	...	...	...	...	...	2,949	19	260	51	3,279
1888-89 ...	66,703,481	2,433	...	...	2,449	...	...	...	4 36	...	...	1,779 0	...	...	...	...	...	...	...	...	2,922	18	272	48	3,260
1889-90 ...	66,703,481	2,408	...	...	2,480	...	...	...	5 36	...	...	1,688 17	...	...	...	...	...	...	...	...	2,819	17	253	41	3,130
1890-91 ...	66,703,481	2,669	...	...	2,882	...	...	...	7 34	...	...	1,624 0	...	...	...	...	...	...	...	...	2,586	22	242	37	2,887
1891-92 ...	71,069,643	1,315	...	...	2,517	...	...	...	11 18	...	...	1,579 38	...	...	...	...	...	...	...	...	2,578	26	271	32	2,907
1892-93 ...	71,271,080	3,540	...	...	3,429	...	...	...	11 26	...	...	1,510 19	...	...	...	...	...	...	...	...	2,672	31	288	33	3,024

NOTE.—In column 6 the number of men

Provinces for the years 1873-74 to 1892-93.

Amount of license fees.					Amount of fixed duty.					Total revenue.					Quantity sold (retail).				Revenue per head of population, column 41÷column 2.	Population per retail license, column 2÷column 26.	Remarks.
On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	Total.	On ganja.	On charas.	On bhang.	On other preparations of the hemp plant (majum).	Total.	From ganja.	From charas.	From bhang.	From other preparations of the hemp plant (majum).	Total.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant (majum).			
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Mds. s.	Mds. s.	Mds. s.		Pie.		
2,41,494	3,103	13,387	2,282	2,60,266	8,36,355	...	...	...	8,36,355	10,77,849	3,103	13,387	2,282	10,96,621	8,125 27	...	...	...	...	...	
2,52,634	2,750	10,150	2,101	2,67,635	8,05,544	...	2,405	...	8,07,949	10,58,178	2,750	12,555	2,101	10,75,584	7,830 11	...	240 20	...	...	...	
3,59,690	2,593	9,438	2,261	3,73,982	7,60,659	...	2,508	...	7,63,167	11,20,349	2,593	11,946	2,261	11,37,149	7,389 8	...	250 32	...	3	16,175	
4,23,658	2,671	10,901	2,551	4,39,781	7,73,458	...	2,541	...	7,75,999	11,97,116	2,671	13,442	2,551	12,15,780	7,458 22	...	254 4	...	3	17,207	
5,11,766	3,141	10,616	2,818	5,28,341	8,73,891	...	2,140	...	8,76,031	13,85,657	3,141	12,756	2,818	14,04,372	8,196 34	...	214 0	...	4	16,502	
5,41,436	3,657	13,278	2,684	5,61,055	8,04,291	...	2,986	...	8,07,277	13,45,727	3,657	16,264	2,684	13,68,332	5,461 25	...	298 21	...	4	16,538	
5,23,669	4,547	10,040	2,279	5,45,535	7,61,494	...	10,314	...	7,71,808	12,90,163	4,547	20,354	2,279	13,17,343	5,137 17	...	518 26	...	4	16,886	
6,26,557	8,552	13,003	2,578	6,50,690	8,28,117	136	13,607	...	8,41,860	14,54,674	8,688	26,610	2,578	14,92,550	5,600 11	0 17	680 13	...	4	17,190	
7,55,632	6,482	15,643	2,423	7,80,180	9,58,159	1,083	16,251	...	9,75,493	17,13,791	7,565	31,894	2,423	17,55,673	6,431 9	3 5	811 9	...	5	17,061	
7,95,223	3,481	16,104	2,543	8,17,351	10,65,274	1,212	15,693	...	10,82,179	18,60,497	4,693	31,797	2,543	18,99,530	5,645 36	1 36	782 39	...	5	18,243	
8,44,776	2,118	16,478	2,232	8,65,604	11,28,937	792	16,800	...	11,46,529	19,73,713	2,910	33,278	2,232	20,12,133	5,881 0	2 29	839 36	...	5	18,144	
8,62,417	995	17,645	2,339	8,83,396	11,25,183	624	16,719	...	11,42,526	19,87,600	1,619	34,364	2,339	20,25,922	5,798 4	1 24	834 33	...	5	18,768	
8,60,991	898	17,199	2,347	8,81,435	10,85,636	748	17,224	...	11,03,608	19,46,627	1,646	34,423	2,347	19,85,043	5,717 25	2 15	859 0	...	5	19,689	
8,90,646	967	18,708	2,459	9,12,780	11,85,033	995	19,240	...	12,05,268	20,75,679	1,962	37,948	2,459	21,18,048	6,264 6	3 32	963 38	...	6	19,617	
9,35,894	1,199	21,874	2,202	9,61,169	13,09,126	1,573	20,192	...	13,30,891	22,45,020	2,772	42,066	2,202	22,92,060	6,550 14	4 35	1,009 38	...	6	20,342	
9,52,064	1,166	22,267	2,092	9,77,589	13,66,289	1,589	20,404	...	13,88,282	23,18,353	2,755	42,671	2,092	23,65,871	6,413 10	4 36	1,020 12	...	6	20,461	
9,70,613	1,623	23,074	2,067	9,97,377	12,89,077	1,912	20,067	...	13,11,056	22,59,690	3,535	43,141	2,067	23,08,433	6,101 9	5 36	1,003 20	...	6	21,311	
10,01,628	3,902	25,544	1,910	10,32,984	13,10,085	2,692	19,303	...	13,32,080	23,11,713	6,594	44,847	1,910	23,65,064	6,095 37	7 34	964 25	...	6	23,104	
10,44,503	4,144	27,179	1,962	10,77,788	12,48,065	3,424	21,285	...	12,72,774	22,92,568	7,568	48,464	1,962	23,50,562	5,677 31	11 18	1,064 10	...	6	24,447	
11,05,435	5,341	32,877	1,984	11,45,637	12,80,631	3,756	20,681	...	13,05,068	23,86,066	9,097	53,558	1,984	24,50,705	5,451 14	11 26	1,033 28	...	6	23,560	

engaged in cultivation has been shown.

APPENDIX A.

(SEE PARAGRAPH 30 OF MEMORANDUM.)

Brief historical sketch of the modes of taxation of ganja.

Earliest rules.

It will appear from paragraph 1, section XI of Harrington's Analysis, Vol. III (1817), that with a view to check immoderate consumption, and at the same time to augment the public revenue, it was judged expedient to continue and extend the duties levied on liquors and drugs, when the sayer collections were resumed from the landlords in the year 1790. Rules and orders were accordingly issued from time to time which were subsequently enacted with modifications in Regulation XXXIV, 1793, as regards the Lower Provinces. It was enjoined in section XVIII of this Regulation that "no person shall manufacture or vend any such drugs ('bhang, ganja, charas, and other intoxicating drugs') without a license from the Collector of the zillah."

Daily rates of license fees.

2. In section II of Regulation VI of 1800 the following daily rates of duty on the sale of intoxicating drugs were laid down :—

	Rs.	A.
For cities (Dacca, Murshidabad, Patna, and Benares)	1	0
Towns or villages (1st class)	0	12
„ (2nd „)	0	8
„ (3rd „)	0	4

It is noteworthy that the manufacture and vend of "charas" (as well as that of madak) were prohibited by section 8 of this Regulation as "being of a most noxious quality."

Unlicensed sale of intoxicating drugs was again prohibited by section 17 of Regulation X of 1813, and vendors were enjoined to pay a daily tax for their licenses. The sale of charas was again prohibited.

Farming system.

3. Section 8 (1st clause) of Regulation VII of 1824 authorized the Board of Revenue to sanction the grant of leases of the duties leviable on the manufacture and sale of spirits, drugs, &c. Section 15 permitted the retail sale of charas under the same rules and restrictions as ganja, &c.; it was said that the restriction was withdrawn, as this drug was found on examination to be not more prejudicial to health than ganja or other intoxicating drugs.

Limits of retail sale.

4. In section 5 of Act XI of 1849 (I.C.), which was passed "for better securing the abkari revenue of Calcutta" the present limits of retail sale of ganja, bhang, charas, and other hemp-drugs, &c., were fixed. This provision was extended to the whole of Bengal by section 35 of Act XXI (I.C.) of 1856.

5. From the beginning of British rule up to the year 1853, hemp-drugs were taxed by means of a daily tax on its retail sale, and it appears from section 4 of Regulation VI of 1800 that it was paid monthly and on the last day of each month of the Bengali (or fasli) year. With the introduction of the farming system in 1824, it was usual to farm out the excise revenue of entire districts. This continued till 1847.

Fixed duty system.

6. From 1853 the daily tax was abolished and a duty at Re. 1 per seer was imposed, and the retailer had to pay the full amount on a certain specified quantity in each month, whether he took it all or not. A series of rules called "Abkari Series" were subsequently framed by the Board in 1857, from which extracts are given below, which will show how the revenue was collected during the period of the fixed duty system :—

(Settlements—Ganja—clauses 16 to 20.)

"16. Retail vendors will engage to take supplies sufficient for a specified daily consumption and to pay tax at the rate of one rupee per seer upon such specified quantity."

"17. Retail vendors will pay their tax at such fixed intervals, not exceeding twice a month, as the Collector may determine, and will take their supplies from any registered golah or from a despatch in transit, under passes or delivery orders which will be granted by the Collector to the extent specified in their pattahs."

"18. If any extra quantity be required, a pass or order for such extra quantity will be granted on payment of duty at the rate of one rupee per seer."

"19. No tax or fee in excess of the one rupee per seer will be required from retail vendors. The settlement of the ganja mahal will thus be on the same principle as that of the spirit mahal under the sadar distillery system, the license specifying the quantity of ganja to which the retail vendor is entitled at the rate of one rupee per seer, with the privilege of taking further supplies under extra passes on payment of extra duty."

"20. Ganja vendors, who are unable to dispose, within the month, of the whole quantity of ganja to which their jama entitles them, may be permitted to draw the balance in the succeeding month without further payment of duty."

Combined duty and fixed monthly license-fee system.

7. The fixed duty system continued up to 1860-61, or for about seven years, when a fixed fee of Rs. 4 per mensem was prescribed for each ganja license in addition to the duty at the prescribed rate on all quantities passed to the shop for retail sale, the previous rule regarding the quantity to be taken by each shop being at the same time withdrawn. A revised form of ganja license, necessitated by these changes, was issued with the Board's circular order No. 26 of 1st June 1860.

Summary.

8. Thus there was a daily tax system from 1790 to 1853 (with farming system from 1824), fixed duty system from 1853 to 1860, fixed license-fee and duty system from 1860 to 1876, when the present system came into force.

ASSAM MEMORANDUM.

Both cultivated and wild hemp are consumed in this province. The cultivated hemp is entirely imported from Rajshahi in the form of flat, round, choor ganja by licensed wholesale vendors, who place the drug in registered warehouses, and the duty is paid by retail vendors when the ganja is taken from the registered warehouses. The vend of charas and bhang is at the present moment forbidden in Assam, no licenses having been taken out. The use and sale of wild hemp as an intoxicant is forbidden. But the possession of wild hemp as a medicine for cattle is permitted by a circular issued in 1882, a copy of which is enclosed. The wild plant grows freely in all parts of the province and especially in the hill tracts by dwellers in which it is illicitly sold in small quantities to the neighbouring plains people. It is also grown in the Bhutan Hills and is sold privily in small quantities when the Bhutias come down to trade in the cold weather. Similarly, men from Independent Tipperah sell the wild plant to the inhabitants of Sylhet. No pains are taken, it is believed, to extirpate the male plants by people who deal in wild hemp, of which the leaves and stalks as well as the flowers are sold. There is nothing to show that the trade in the wild plant is sufficiently large to compete seriously with excise ganja, unless possibly in the Khasi Hills, where the continuous decrease in the consumption of the Rajshahi drug can, I think, only be attributed to the cheapness of wild hemp, and the great facilities for its use. But the excise administration of this district is attended by abnormal difficulties owing to the fact that the Khasi Hills are parcelled out into the territories of many semi-independent Chiefs. On the whole, the consumption of wild hemp is small, is effectually checked by prosecutions from time to time, and cannot, I think, be checked in any other way. The wild plant is used by habitual consumers only as a *pis aller*, and when their supply of the excise ganja runs short. I do not think any more need be said about the wild plant.

2. With regard to excise ganja, we only use the three varieties above mentioned, and in our dealings with them are entirely guided by the excise system of the neighbouring province of Bengal. All our excise ganja comes to us from Bengal, and is dealt with in accordance with the Bengal Board of Revenue's Excise Manual. The three districts of Sylhet, Cachar, and Goalpara, in the matter of ganja consumption, entirely resemble the adjacent Bengal districts of Mymensing, Tipperah, and Rangpur. In the five districts of Assam proper, namely, Kamrup, Darrang, Nowgong, Sibsagar, and Lakhimpur, and in the three hill districts, namely, the Garo, Khasi, and Naga Hills, ganja is consumed chiefly by foreigners. The inhabitants of the first five districts are perhaps the largest consumers of opium in India; and in spite of the great decrease of opium shops, and the enormous increase in retail prices which our excise system has brought about, ganja has not, to any considerable extent, taken the place of opium. But these five districts contain about half the tea gardens of the province, and consequently possess a large immigrant population—men from Behar, Chota Nagpur, the North-Western Provinces, &c., who are many of them habitual consumers of ganja. In the three hill districts ganja is chiefly consumed by imported servants of the State—sepoys, police constables, &c. The duty on ganja, as I have already said, is the same as that in Bengal. The varying retail prices are regulated by (1) the cost of importation (which is very heavy in the hill districts); (2) by license fees, which are fixed by putting up each retail shop to auction sale. The results of sale usually agree roughly with the local demand and the probabilities of making a profit. Occasionally, however, a combination is formed among the bidders for keeping down prices. In such cases, it has occasionally been found necessary to let a whole district to a monopolist. This expedient is, however, very rarely adopted, inasmuch as it leads to an enormous increase in the retail prices and a consequent encouragement to smuggling and the use of the wild plant. This preface will probably make the following answers to the questions proposed by the Commission complete and readily intelligible:—

(*a*) The vend of the drug throughout the province is carried on under one uniform system under the general supervision of the Commissioner of Excise. The district administration is carried on by the respective Deputy Commissioners assisted by the Sub-Divisional Officers within the boundaries of their respective charges. No separate coercive establishment is kept up, and enquiry into the breaches of the Excise Law is made chiefly through the police. The Act in force is Act VII (B.C.) of 1878, as amended by Act IV (B.C.) of 1881, and also Act I (B.C.) of 1883 and the rules and circulars issued by the Bengal Board of Revenue under that Act. I append a list of circulars (with an abstract of their subject-matter) issued by the Chief Commissioner and by the Commissioner of Excise, Assam, for this province exclusively.

(*b*) I have already stated the extent to which wild hemp grows in this province and the steps taken to control its use. A perusal of Circular No. 28 of 1882, above alluded to, will make this quite clear.

(*c*) The cultivation of hemp for the production of drugs is entirely forbidden.

(*d*) Ganja is imported by licensed wholesale vendors, who hold licenses to open registered warehouses. These warehouses are under double lock and key, one key being in the hands of a Government officer, the other in those of the vendor. Ganja is imported, as in Bengal, under passes issued by the District or Sub-Divisional Officer, a fee of Rs. 2 being charged for each pass. When a retail

vendor desires to remove ganja from a registered warehouse, he pays the requisite amount of duty into the Treasury and receives a pass (without fee) which enables him to take the necessary supply of drug from the warehouse to his shop. The warehouses are usually small constructions of wood, lined with tin. In rare cases they are made of masonry. Transport is allowed from one warehouse to another under the cover of passes issued by the Deputy Commissioner.

(*e*) The number of wholesale vendors in a district is fixed by the Commissioner of Excise in accordance with local requirements. That is, new licenses are not given without careful enquiry, and without ascertaining that the existing licensed vendors are not sufficient in number to carry on the business of importation. An excess in the number of wholesale vendors might lead to an undue cheapening of the drug or to smuggling. In Sylhet, the most populous district in the province, there are 17 vendors. In the Assam Valley the largest number is in Kamrup, namely, 9. But the licensed vendors of several other districts draw their supply from Kamrup. The retail vendors are all licensed; they have to pay their license fees monthly in advance, two months' fees being paid at the date of sale. They are compelled to keep accounts of all purchases and sales of the drug. These are carefully scrutinized from time to time by Magistrates and Police officers, who can demand the immediate production of the license and accounts at any time.

(*f*) The tax on ganja consists of (1) duty collected as above, (2) and license fee paid monthly as above. Payment of duty can only be evaded by the collusion of the Excise Officer.

(*g*) The number and sites of retail shops are fixed by the Commissioner of Excise in consultation with the district authorities, who endeavour, as far as is possible by personal enquiries, and by consulting the police, mauzadars, &c., to discover the wishes of the people of the locality. An upset price is fixed on the average fees paid during the previous three years. Experience shows that a minimum upset price is a good guide to local demand. Statement appended gives the number of shops to population. The population varies so enormously in proportion to area in different parts of Assam, that it is impossible to make area a factor in fixing sites for shops. Shops are commonly placed in bazár and other centres of trade, and the vendors usually deal in other commodities, such as spices, &c. Complaints as to the location of ganja shops are carefully considered, but very rarely occur. Complaints by people living near spirit shops and specially by European planters are comparatively common. Ostensibly we have no local option, except as above described, that, as a matter of fact, if the people of any locality objected to, or desired the opening of a new shop, they would not hesitate to make their wish known to the district officials, or, if necessary, to the Commissioner of Excise. In the case of ganja, such references are extremely rare. In the hill districts and Assam proper, the shops are few and far between; in Sylhet and Cachar the number has been largely reduced of late years, and the only doubt possible is whether the reduction has not been too great. In 1890-91 the retail shops in Sylhet were reduced from 148 to 110, and in Cachar from 52 to 42. No complaints were made by the general public.

(*h*) No rate is fixed at which the drug is to be supplied by wholesale to the retail vendors. The rate is fixed by competition, and if the wholesale vendors of one district attempt to force the price too high, retail vendors have recourse to the "golahs" of a neighbouring district. In many cases the wholesale vendors also hold retail shops. The average retail price to consumers, district by district, is given below for the past two years. The circumstances which affect the retail price have already been stated :—

District.	Average retail price per seer in						Remarks.
	1891-92.			1892-93.			
	Rs.		Rs.	Rs.		Rs.	
Cachar	12	to	16	16	to	25	(Average.)
Sylhet	14	„	17-8	15-6			
Goalpara	15	„	25	20			
Kamrup	10	„	25	20	to	25	
Durrang	25	„	40	25	„	40	
Nowgong	25	„	30	20	„	25	
Sibsagar	30	„	35	30	„	35	
Lakimpur...	30	„	40	30	„	40	
Naga Hills	40	„	45	40			
Khasi Hills	20			25			
Garo Hills	12-8			15			

(*i*) The maximum limit of possession by ordinary consumers is, as in Bengal, 20 tolas. It has not been found necessary to fix any minimum price. But in this matter we simply follow the precedent of Bengal.

(*j*) The dried wild plant is smuggled into the province in small quantities from Bhutan and Hill Tipperah. Beyond the intervention of the police, no steps have been

considered necessary to defeat a practice which is carried on on a very small scale. We occasionally get information (for which rewards are paid by the Deputy Commissioners) from retail vendors and others.

(*k*) No modifications of the excise system with reference to hemp drugs are under the consideration of the local Government.

(*l*) The statement called for by the Commission is appended hereto. I add some explanations of the more important variations in consumption from year to year.

In 1874-75 there was a decrease in consumption in Cachar owing to a combination among the wholesale vendors to raise the price.

In the following year a similar cause produced similar effects in Sylhet, while the breaking up of the combination in Cachar led to a reduction in retail prices and increased consumption. In 1876-77 the combination in Sylhet continued and resulted in a further decrease in consumption, while in Cachar, Goalpara, and Kamrup the whole district was farmed out to a monopolist, who found his profit in charging high prices, which checked consumption. In 1877-78 the consumption in Sylhet increased owing to the breaking up of the combination among the goladars and a consequent fall in retail prices. The increase in Goalpara was attributed by the district authorities to the fact that opium had become too costly for common use and that people were taking to ganja instead. This was probably a mere guess, and does not appear in the explanations of subsequent years. In fact, careful inquiries have since shown that ganja is not taking the place of opium.

In 1878-79 there was an increase of the rate of duty in Sylhet alone, and this was followed by a large decrease in the amount of ganja taken from the district shops. Strange to say, however, there was also a decrease in the neighbouring district of Cachar, where the rate of duty was not enhanced till the following year. In Cachar the diminution was attributed to the high rates charged by the wholesale vendors in anticipation of an enhanced duty.

In 1879-80 when the enhanced rate of duty was extended to the whole province, an increased consumption of about three maunds in each case occurred in Sylhet and Cachar. There was a decrease in all the remaining districts, and especially in Goalpara, where the season was a bad one, and the price of food-grain was high. In the next two years consumption remained pretty steady.

In 1883-84 there was a somewhat large increase of 58½ maunds. This was chiefly due to the breaking up of the monopoly in Cachar, which resulted in a reduction of retail prices. In Kamrup there was an increase of over 16 maunds, but, as above explained, many districts (Darrang, Nowgong, the Khasi Hills, &c.) draw their supply from this district. In Sylhet there was a falling off of over 19 maunds, but no doubt many consumers drew their supply from Cachar.

In 1885-86 there was a very large decrease in consumption, entirely due to the decrease in the Sylhet district attended as before by an increase in Cachar.

In the following year the pendulum swung backwards, and in Sylhet and Kamrup, which had shown a large falling off in 1885-86, there was an increase in consumption. This, as before, was no doubt due to the breaking up of combination among the wholesale vendors.

In 1887-88 there was again a decrease in Sylhet and Cachar, in the former district amounting to as much as 73 maunds. The year was one of scarcity and high prices, but an increase in prices and decreased consumption would probably have occurred in any case. In Lakhimpur the rapid increase of the immigrant population induced the Commissioner to authorize the opening of a second registered warehouse (there had only been one heretofore). This appears to have led to a fall in retail prices and a small (temporary) increase in consumption.

In 1888-89 Sylhet and Cachar again show an increase between them of some 71 maunds. The year was a good one from an agricultural point of view, and probably the anticipation of good sales brought about the breaking up of the combination among wholesale vendors. Moreover, the increase in this year was less than appears at the first sight. The duty on choor and round ganja was raised; that on flat ganja remained the same. This stimulated the consumption of flat ganja, which consists largely of stalks and stems.

In 1889-90 the increased consumption continued, the year being again one of good harvests. So also in 1890-91, in which year the consumption in Cachar was greatly stimulated by the influx of foreigners in connection with the Lushai expedition.

In 1891-92 the decrease of 27 maunds odd was chiefly due to the partial failure of the crop in Rajshahi, which raised the wholesale price of the drug; nor was the quantity required available for import.

The decrease of nearly 80 maunds in 1892-93 occurred almost entirely in the district of Cachar, and was due to the fact that the whole district was leased to a monopolist. In other districts the decrease was more apparent than real, owing to an increased resort to the use of round and choor ganja in preference to flat ganja.

(*m*) As I have already pointed out at length, our system of administering ganja is derived from, and carried on, in conformity with the Bengal system. It would

be possible for us to vend ganja in the same way as we now vend opium. To take this step would give us an increased hold over the vendors, and a possibility of influencing retail prices more effectually than at present. The experiment is in fact being tried on a small scale in the Khasi Hills. But to adopt it for the province at large, we should require the co-operation of the Bengal Government. Probably the introduction of a similar system in Bengal would be necessary. With regard to opium the system, as is well known, is for Government to buy the opium from the cultivators, and to sell it directly after manufacture to the retail vendors. Whether such a system can profitably be applied to ganja is probably best known to the authorities in Rajshahi. In practice the present system works fairly well: all reasonable facilities for the sale of the drug are given, while it cannot be said that the number of shops is such as to create an artificial demand for ganja. The one drawback of the system lies in the violent vacillations in retail prices due to the forming and breaking up of the combinations among the wholesale vendors.

Circular No. 28, dated Shillong, the 26th October 1882.

From—C. J. LYALL, ESQ., C.I.E., Offg. Secy. to the Chief Commissioner of Assam, Revenue Department,

To—All Deputy Commissioners, Plains Districts.

I AM directed to invite your attention to the Notification No. 27, dated the 20th October, published in the *Assam Gazette* of the 21st idem, declaring, under section 17A of the Excise Act, VII (B.C.) of 1878, as amended by Act IV (B.C.) of 1881, that the possession without a license of any "foreign exciseable article" (except spirituous and fermented liquors imported by sea, and kept only for private use and consumption and not for sale) in any quantity whatsoever, is absolutely prohibited in the plains districts of this province.

2. "Foreign exciseable article" is defined in section 3 of Act IV (B.C.) of 1881 so as to include not only exciseable articles manufactured or produced at any place beyond the limits of British India, but also all such articles produced or manufactured in places within British India, where no duty of excise is levied upon them. Such places are the Hill Districts in respect of country spirits and ganja, and the Act amending Act VII (B.C.) of 1878 was passed mainly with the object of preventing injury to the excise revenue of the plains districts from the introduction into them of untaxed spirits and ganja or bhang from the Garo, Khasi and Jaintia, North Cachar, and Naga Hills. If in your district any such importation, or importation from foreign territory, exists, you should take steps to make the prohibition widely known and understood. Magisterial officers should of course, especially at the outset, deal leniently with such cases of possession, where there is reason to believe that the importation was made in ignorance of the prohibition. It must be understood that this notification does not make the possession of wild ganja, whether green or dry, illegal, if it is grown in a plains district, but only if grown in a hill district, or beyond the British boundary.

3. In connection with the discussions which have preceded the issue of this notification, it has been brought to the Chief Commissioner's notice that the wild hemp plant, which grows abundantly both in the hills and plains of this province, is largely used, after being cut and dried, as a medicine for cattle. I am to invite your attention to sections 16 and 17, rule 2 of Chapter XV of the Board's Rules, Vol. I., edition of 1878, which bear upon this subject, and describe the different preparations of hemp which are "exciseable articles." Ganja is said by the Board to be made from the dried flowers of the female hemp plant, and some authorities say that it is only made from the cultivated plant. Bhang, again (which according to the Board is otherwise called siddhi, patti, or sabji), is said by them to be made from the dried leaves of the wild plant, and to be usually consumed in some liquid or to be mixed with sugar and ghi in the electuary called majum. Charas is the resin found on the flowers and leaves of the plant, in which the active intoxicating principle of all the preparations resides: it is not sufficiently abundant to be collected separately in most of the varieties of hemp grown in India, and is chiefly imported from Afghanistan and Yarkand. Thus, the danger to the excise revenue from the illicit use of wild hemp arises from its use as bhang, not as ganja properly so called. Its cultivation without a license is already prohibited by section 5 of the Excise Act. By section 2 of the Act the sale of bhang in any quantity without a license is forbidden. By sections 15 and 17 of the Act the possession of a larger quantity of bhang than a quarter of a seer, except by a licensed vendor, is prohibited.

4. But you will observe that in rule 2 of section 17 of Chapter XV of the Board's Rules it is said that "no restriction is imposed on the use of the hemp plant in its green state for medical or other purposes, or on its manipulation for the manufacture of fibre. But any preparation of the plant to be used, stored and sold as a narcotic or stimulant is prohibited, except under the rules framed under the Act." This rule mentions the medicinal use of the plant only "in its green state;" but if, as appears to be the case, the wild hemp is also used as a medicine for cattle when dried, the Chief Commissioner desires that the rule may be liberally interpreted, and no penalty imposed when it is probable that the cultivation or the drying and storing of it was only for this purpose. Whether this was so or not is of course a question of fact.

5. This circular should be communicated to all judicial officers subordinate to you and also filed in the judicial side of your office.

PROVINCE

Statistics relating to Hemp Drugs

Year.	Population of the province.	Cultivation of hemp for narcotic.						Amount of imports from other provinces in maunds and seers.				Amount of exports to other provinces in maunds and seers.				Number of licenses for wholesale vend.					Number of licenses for retail vend.					Amount of license			
		Area under cultivation.			Licenses for cultivation.																								
		Ganja.	Charas.	Bhang.	Ganja.	Charas.	Bhang.	Ganja.	Charas.	Bhang.	Other preparations of the hemp plant.	Ganja.	Charas.	Bhang.	Other preparations of the hemp plant.	Ganja.	Charas.	Bhang.	Other preparations of the hemp plant.	Total.	Ganja.	Charas.	Bhang.	Other preparations of the hemp plant.	Total.	Ganja.	Charas.	Bhang.	Other preparations of the hemp plant.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
								Md. s.								(a)										Rs. a. p.	Rs. a. p.	Rs. a. p.	
1873-74 ...	40,94,972	...	...	...	...	...	...	* ...	*...	...											467	1	...		468	16,408 0 0	22 0 0	...	
1874-75 ...	...	...	...	...	...	...	...	* ...	...	...											447	...	...		447	17,758 0 0	...	...	
1875-76 ...	...	...	...	...	...	...	...	* ...	...	...											465	...	...		465	27,882 0 0	...	...	
1876-77 ...	...	...	...	...	...	...	...	* ...	...	...											267	...	...		267	55,501 0 0	...	...	
1877-78 ...	...	...	...	...	...	...	...	* ...	*...	...											248	2	...		250	87,331 0 0	20 0 0	...	
1878-79 ...	...	...	...	...	...	...	...	* ...	*...	...*											271	1	1		273	76,617 0 0	32 0 0	50 0 0	
1879-80 ...	...	...	...	...	...	...	...	704 31	*...	...											251	1	...		252	71,967 0 0	72 0 0	...	
1880-81 ...	48,81,426	...	...	...	...	...	...	748 0	...	...											282	...	...		282	93,543 0 0	...	...	
1881-82 ...	...	...	...	...	...	...	...	514 31	...	...											286	...	...		286	1,02,395 0 0	...	...	
1882-83 ...	...	...	...	...	...	...	...	611 35	...	...											294	...	...		294	1,10,367 0 0	...	...	
1883-84 ...	...	...	...	...	...	...	...	654 17	...	...											319	...	...		319	1,16,998 0 0	...	...	
1884-85 ...	...	...	...	...	...	...	...	869 2	...	...											314	...	...		314	1,21,558 0 0	...	5 0 0	
1885-86 ...	...	...	...	...	...	...	...	461 26	...	...											317	...	1		318	1,27,487 0 0	...	44 0 0	
1886-87 ...	...	...	...	...	...	...	...	756 11	...	...											321	...	1		322	1,21,592 0 0	...	22 0 0	
1887-88 ...	...	...	...	...	...	...	...	647 6	...	...		7 0†									327	...	...		327	1,07,699 0 0	...	...	
1888-89 ...	...	...	...	...	...	...	...	767 34	...	...											328	...	...		328	1,05,528 0 0	...	...	
1889-90 ...	...	...	...	...	...	...	...	774 8	...	...		4 19†									327	...	...		327	1,14,336 0 0	...	...	
1890-91 ...	54,43,139	...	...	...	...	...	...	734 32	...	...											282	...	...		282	1,35,668 0 0	...	...	
1891-92 ...	...	...	...	...	...	...	...	791 18	...	...											277	...	...		277	1,43,481 0 0	...	...	
1892-93 ...	...	...	...	...	...	...	...	687 27	...	...											272	...	...		272	1,64,088 0 0	...	...	

Figures not available. — *Nil.* — Nil. — Nil. — Nil. — Figures not available. — Nil. — Nil. — Nil. — Figures not available. — Nil. — Nil.

OF ASSAM.

for the years 1873-74 to 1892-93.

...ees.	Amount of fixed duty.					Total revenue.					Quantity sold (retail).				Revenue per head of population, column 41 ÷ column 2.	Population per retail license, column 2 ÷ column 26.	Remarks.
Total.	Ganja.	Charas.	Bhang.	Other preparations of the hemp plant.	Total.	Ganja.	Charas.	Bhang.	Other preparations of the hemp plant.	Total.	Ganja.	Charas.	Bhang.	Other preparations of the hemp plant.			
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Rs. a. p.	Rs. a. p.	Rs.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Md. s.	M.s.	Md. s.	M.s.	Rs. a. p.		
16,430 0 0	82,622 0 0	*...	...		82,622 0 0	99,030 0 0	22 0 0	...		99,052 0 0	826 9	*...	...		0 0 5	8,769	
17,758 0 0	86,823 0 0	...	...		86,823 0 0	1,04,581 0 0	...	...		1,04,581 0 0	868 9	...	...		0 0 5	9,161	(a) Represents registered warehouses.
27,882 0 0	81,375 0 0	...	...		81,375 0 0	1,09,257 0 0	...	...		1,09,257 0 0	814 22	...	...		0 0 5	8,806	*Figures not available.
55,501 0 0	64,241 0 0	...	...		64,241 0 0	1,19,742 0 0	...	...		1,19,742 0 0	633 37	...	...		0 0 6	15,034	† Excise ganja exported to Mymensingh in Bengal.
87,351 0 0	67,375 0 0	*...	...		67,375 0 0	1,54,706 0 0	20 0 0	...		1,54,726 0 0	642 0	*...	...		0 0 7	16,512	
76,699 0 0	75,889 0 0	*...	*...		75,889 0 0	1,52,506 0 0	32 0 0	50 0 0		1,52,588 0 0	587 2	*...	*...		0 0 7	15,111	
72,039 0 0	83,096 0 0	*...	...		83,096 0 0	1,55,063 0 0	72 0 0	...		1,55,135 0 0	570 27	*...	...		0 0 7	16,315	
93,543 0 0	84,531 0 0	...	...		84,531 0 0	1,78,074 0 0	...	...		1,78,074 0 0	593 13	...	...		0 0 8	17,310	
1,02,395 0 0	84,385 0 0	...	...		84,385 0 0	1,86,780 0 0	...	...		1,86,780 0 0	574 15	...	...		0 0 7	17,068	
1,10,367 0 0	87,307 0 0	...	...	*Nil.*	87,307 0 0	1,07,674 0 0	...	...	*Nil.*	1,07,674 0 0	579 15	...	...	*Nil.*	0 0 8	16,603	Figures under charas and bhang are given for the years in which such licenses were granted.
1,16,998 0 0	1,22,874 0 0	...	...		1,22,874 0 0	2,39,872 0 0	...	...		2,39,872 0 0	638 6	...	...		0 0 9	15,302	Rs. 5 shown in columns 29 and 39 against the year 1884-85 represents advance collection for 1885-86.
1,21,563 0 0	1,25,225 0 0	...	...		1,25,225 0 0	2,46,783 0 0	...	5 0 0		2,46,788 0 0	634 35	...	...		0 0 10	15,546	
1,27,531 0 0	97,940 0 0	...	35 0 0		97,975 0 0	2,25,427 0 0	...	79 0 0		2,25,506 0 0	515 27	...	3 9		0 0 9	15,350	
1,21,614 0 0	1,25,579 0 0	...	92 0 0		1,25,671 0 0	2,47,171 0 0	...	114 0 0		2,47,285 0 0	666 39	...	3 6		0 0 10	15,159	
1,07,699 0 0	1,14,812 0 0	...	...		1,14,812 0 0	2,22,511 0 0	...	...		2,22,511 0 0	613 6	...	...		0 0 8	14,928	
1,05,528 0 0	1,33,533 0 0	...	...		1,33,533 0 0	2,39,061 0 0	...	...		2,39,061 0 0	677 10	...	...		0 0 9	14,882	
1,14,336 0 0	1,36,449 0 0	...	...		1,36,449 0 0	2,50,875 0 0	...	...		2,50,875 0 0	700 12	...	...		0 0 11	14,928	
1,35,668 0 0	1,43,860 0 0	...	...		1,43,860 0 0	2,79,528 0 0	...	...		2,79,528 0 0	728 27	...	...		0 0 10	19,267	
1,43,481 0 0	1,46,738 0 0	...	...		1,46,738 0 0	2,90,219 0 0	...	...		2,90,219 0 0	700 38	...	...		0 0 10	19,614	
1,64,088 0 0	1,39,545 0 0	...	...		1,39,545 0 0	3,03,633 0 0	...	...		3,03,633 0 0	620 25	...	...		0 0 11	19,975	

NORTH-WESTERN PROVINCES AND OUDH MEMORANDUM.

1. It will be convenient to first describe the kinds of hemp drugs in use in these provinces: then to indicate the sources of supply, dealing separately with—(1) home growth and manufacture and (2) imports. The system of administration will then be described. In connection with this the desired information concerning taxation, prices, and consumption will be given so far as it is available. Finally the contemplated changes in the present system will be discussed.

DESCRIPTION OF DRUGS IN USE.

2. The forms of hemp drugs in use in these provinces are—

1. Bhang.
2. Ganja.
3. Charas.

With bhang I include majum, which is a confection prepared from extract of bhang, ghi, and sugar.

BHANG.

3. Bhang consists simply of the leaves, flowers, and leaf stalks of either male or female plant. It requires no cultivation and no process of manufacture beyond drying and stripping the plant. Bhang is not smoked so far as I can discover, but is taken as a draught or as a confection in the shape of majum. Looking, however, at some of the specimens of so-called "wild ganja," which are smoked and which seem to me to differ very little from bhang, I hesitate to say that bhang could not and would not be smoked if ganja or charas were unprocurable.

4. Bhang is used everywhere throughout the provinces and more largely than other hemp-drugs by the better classes. The Brahmans of Muttra are said to be the largest consumers known. I have heard it said that a single man can take as much as a quarter of a seer in the day,-and it is a jest against them that they wish Providence had made the Jumna a river of bhang.

Bhang is, I believe, little, if at all, used as a mere intoxicant. It is chiefly taken as a stimulant or refreshment and perhaps even more as a tonic medicine. It is supposed to have cooling properties and its use largely increases in the hot season. Natives regard bhang as a comparatively harmless preparation, and its use is not generally looked upon as disreputable. It is also very largely used as a medicine for cattle either when sick or worn out by fatigue, and for this purpose it is found valuable by cultivators. Its use for cattle is, I believe, most general in the localities where the plant grows wild about the fields, and can, therefore, be procured for nothing. A common reason given by persons who are found in illegal possession of bhang is that they mean to use it for cattle medicine.

GANJA.

5. Of ganja I need only say here, by way of definition, that properly speaking it is the unfertilized female flower. It is chiefly used in the eastern and central districts, and this is naturally explained by the circumstance that these districts are nearest the sources of supply. It is most in favour in the east. In the central districts it has more difficulty in contesting the field with charas. In the western districts marginally noted it is not sold at all. In Muttra and Meerut a small quantity is imported for the use of domestic servants and followers of the troops. In Agra it is comparatively little consumed.

Dehra Dun.	Bijnor.
Saharanpur.	Pilibhit.
Muzaffarnagar.	Shahjahanpur.
Bulandshahr.	Kumaun.
Aligarh.	Garhwal.
Bareilly.	Naini Tal.

6. It is chiefly used by the labouring classes and undoubtedly enables men, perhaps more than any other stimulant, to sustain severe and prolonged bodily labour. Used in moderate quantities, as it is generally taken, it does not seem to unfit people for their work. Excess in it is unquestionably deleterious. Ganja, so far as I can discover, is always smoked. I have found no case of its being used in any other way. It is most largely consumed in towns, but also finds consumers among the agricultural population. The habit is said to be spread by fakirs and mendicants who are greatly addicted to its use.

CHARAS.

7. Charas is the resinous extract of the hemp plant. As used it is always more or less adulterated with the powdered leaves or stalks of the plant or with other more foreign

substances. It is chiefly consumed in the western districts where ganja is at present unknown. These are the districts which lie nearest the Punjab, whence most of the supply comes. Charas is also consumed more or less extensively in the central districts and is making its way in the east. I attribute this to the constantly increasing price of the Bengal ganja, which was once almost exclusively used there. Now, however, it has to compete with the cheaper "pathar" ganja, which will be described later on. Practically speaking, I should say its use is exclusively confined to the lower classes of society. Its effects are much the same as those of ganja, with which it seems to be physiologically related. It is used for the same purpose and by the same classes of people. I should be slow to dogmatize on the point, but my observations lead me to believe that charas is the most injurious and least reputable of all the hemp drugs, possibly because it may contain the active principle of the plant in the most concentrated form. There are indications that where spirits or opium are supplanted by hemp, charas is the sort of drug usually selected. Its use appears to be extending at the expense of other intoxicants. Its price fluctuates considerably probably in accordance with the conditions of Central Asiatic trade. For the last few years it has been comparatively cheap, while under our system of administration country spirits and opium have been becoming dearer.

Charas is always smoked.

Local growth and manufacture.

8. Turning now to the question of growth and manufacture.

The hemp plant grows in all parts of the provinces, but in varying quantities. It grows absolutely wild in great profusion in all the montane and sub-montane districts.

I place in this category—

Gorakhpur.	Garhwal.
Basti.	Pilibhit.
Gonda.	Bareilly.
Bahraich.	Moradabad.
Kheri.	Bijnor.
Naini Tal (including the Tarai).	Saharanpur.
Kumaun.	Dehra Dun.

To these perhaps may be added Muzaffarnagar, where the plant is reported to grow freely in the low lands of the rivers. In Shahjahanpur and Meerut, too, the produce is considerable.

9. In the districts of Hardoi and Fatehgarh hemp is cultivated to a small extent. It is sown either alone or with the spring crops, and is harvested after they have been reaped. It receives no care beyond that given to the crops with which it is mixed. In the Hardoi district and probably also in Fatehgarh, it is supplemented to some extent by self-grown plant produced about wells or houses and on small waste patches and headlands. All this plant is converted into bhang, which is of a superior quality, technically known as "tatia" (from a village in Fatehgarh district), and commands a much higher price than the wild bhang of the sub-montane districts. Part of the produce is locally consumed and part exported, so it is difficult to ascertain the precise amount of the produce. But I think about 1,000 maunds annually would be a very close estimate. Part of the Hardoi produce is taken across the Ganges to the conterminous district of Fatehgarh and thence exported as Fatehgarh bhang. The annual exports are about 800 maunds. Excluding for the present the hill districts, where hemp is grown for fibre, this is the only case in these provinces where the hemp plant is openly cultivated for commercial purposes.

10. Beyond these districts the hemp plant flourishes widely, though it is not produced in sufficient quantities to render it of any commercial importance. I would not venture to positively assert that it is always of purely indigenous growth, though its wide diffusion leads me to believe that this is the case. It may be seen growing about wells and temples; and in such places, it is no doubt the produce of seeds scattered by travellers and fakirs who use hemp drugs. It is also found in and about houses and in gardens, where it is either introduced in the same way or deliberately sown. In all these cases I think the plants, if not the result of cultivation, are knowingly permitted to grow, and are subsequently used by the people who live in those places. The plant may also be seen springing up in a scattered way in waste places and lowlands.

In some districts the amount produced by these forms of sporadic growth is considerable and is a constant source of complaint by the drug contractors who have the monopoly of vend. These conditions obtain, broadly speaking, to a greater or less extent in all parts of the province lying north and east of the Jumna. In Bundelkhand and most of Mirzapur, in fact in all the country in and adjoining the hill system of Central India the plant is much more rarely found. But that it can be grown and with some perfection in this tract also is shown by the occasional presence of plants and by the existence of considerable cultivation in Gwalior and in some of the Bundelkhand Native States which interlace with British territory.

11. In the Himalayan districts the plant is cultivated and yields fibre which is of some economic importance. It supplies the people with material for their cloth and cordage, and was once a valuable monopoly of the East India Company. In most cases the plant is grown primarily for the fibre, and charas is gained as a subsidiary product. But in some places the charas is said to be the primary object of the cultivation. So far as I can discover, fibre is nowhere extracted from the plant grown in the plains. In some localities, where it grows wild, the stalks are utilized for making thatches, screens, &c.

12. Where grown for fibre in the hills, the plant is sown in the best soil and receives careful cultivation. But both in hills and plains it can and does grow without any care or cultivation of a sufficiently good quality to yield drugs. The brief and material conclusion is that besides a very large and general spontaneous growth, wherever people choose to grow the hemp plant, they can and do grow it in any part of the provinces, and it can be grown under conditions where suppression would be impossible.

13. Under the rules now in force under section 11, Excise Act XXII, 1881, the cultivation of the hemp plant in these provinces is free to all parties. The possession of the drug is permitted to cultivators, to owners of land in which the plant grows spontaneously, to licensed vendors or to persons duly authorized to supply licensed vendors. Its possession by other persons in larger quantities than one quarter of a seer of bhang and five tolas of ganja or charas, is prohibited under sections 22 and 23, clause (*k*), Excise Act.

Section 12 (*d*) permits any cultivator to sell intoxicating drugs prepared from his plants to any person licensed to sell drugs or specially authorized to purchase the same. This permission to cultivators is considered to extend to the sale of their bhang by owners of spontaneous produce. Bhang requires no preparation or manufacture, being only the dried plant stripped of its stalk.

The rules are silent on the subject of manufacture or preparation of drugs. This is probably because outside the hill districts there has hitherto really been no manufacture or preparation in the proper sense of the word carried on in the provinces except a little quasi-surreptitious manufacture of ganja which will be noticed further on. Excepting the wholesale contractor in Saharanpur, no persons are specially authorized to purchase under section 12 (*d*). The business is entirely in the hands of the contractors, who are licensed to sell.

14. In the few cases abovementioned, where the plant is cultivated, the produce is stored by cultivators themselves in their own houses. It is sold to contractors, and when bought for export, is weighed and sealed before the tahsil officials, and exported under pass in the usual way (hereafter described). The produce of the wild plant is similarly treated. The real control lies in the restrictions on sale and transport. But the rules governing cultivation, collection of wild plant, preparation and manufacture, are, I think, susceptible of improvement. So far the rules, however, have worked well enough, partly because the supply of drugs has been ample and cheap and partly because the people generally have not known or realized how far they might go without violating the law and rules. They see that all excisable commodities are a Government monopoly, and, except where hemp is cultivated or collected for sale, they have a belief that its cultivation would render them liable to penalties. The ignorance is shared by some of the officials, who occasionally take cognizance of cases where a few plants are found growing in or about a man's house. In such cases he never pleads that he is entitled to grow them; he always denies the fact or alleges that the plants grew spontaneously without his knowledge. If drugs were forbidden or made prohibitive in price the case would at once alter, cultivation, collection, and manufacture would have to be placed under such control and restriction as might be found possible.

15. The question of manufacture as well as growth of bhang has, perhaps, been sufficiently explained in the foregoing paragraphs. In the case of ganja the manufacture and growth cannot well be separated. The hemp plant, as I have stated, can be, and is grown everywhere, but the production of good ganja requires either the extirpation of the male plant or the isolation of the female plant. The regular cultivation of ganja in this way is not carried on openly anywhere in these provinces. The whole of the ganja offered for public sale is imported. At the same time it would be incorrect to say that ganja is nowhere grown or manufactured. Careful enquiry has elicited reports from several districts that a small amount of ganja is surreptitiously made. I have endeavoured to verify this by obtaining specimens of the local manufacture. It is naturally difficult to obtain a clandestine article, but I have succeeded in getting specimens from Ghazipur and Sultanpur, which have been handed over to the Commission. In appearance the Ghazipur ganja is better than the ordinary "pathar," and not much inferior to Bengal "baluchar" (flat). The other is much the same as "pathar." I hope to obtain further specimens which will be duly submitted. These two samples are clearly made from unfertilized flowers, and the people who made them knew the necessity of preventing fertilization. In Ghazipur the male plants are extirpated and the ganja is prepared from the female flower by a process which closely resembles that employed in Bengal. It sells, I am informed, for two annas per tola. The method of cultivation and manufacture in Sultanpur has not been described.

16. The deduction is significant and instructive. Ganja, of fair or good quality, can be made, and is made, locally. People understand the principle of its manufacture. If this

happens in a few districts, it may happen in any district. There can be no doubt it would happen very generally if the import of ganja were prohibited. The distinction between the male and female plants is everywhere recognized (though the names are sometimes transposed), and it is generally known that the latter yields ganja and the former bhang only. But as yet it is not everywhere or generally known that proper ganja can only be made from the unfertilized flower. Such knowledge, however, would soon spread.

Ganja of a certain sort is also made in Nepal territory, and there is reason to believe in the adjoining parts of this territory. It is introduced by Nepalese who come down for one reason or another and who primarily bring it for their own use, but possibly also do a little trade in it. I will submit a specimen which was procured by the Collector of Basti from a fakir who wanders in and out of Nepal and could not clearly say on which side of the frontier it was grown. The ganja is no doubt very inferior, but compared with the purely wild female plant it seems to me to indicate some preparation from a plant specially grown or tended.

17. Besides these cases it has also been ascertained that wild ganja is collected and used in the Kheri district. I have procured a specimen of this and submitted it to the Commission. It is simply the unprepared flower of the wild female plant fertilized and fructifying. The Deputy Commissioner reports that the people do not understand the necessity for keeping the flower barren. This stuff is locally smoked as ganja, but it is recognized to be of very inferior quality and has no commercial value. In Bara Banki also the wild female plant is collected and smoked under the name of ganja. The specimens indicate an absence of any form of special cultivation or manufacture. There are indications that wild ganja is similarly used in other districts, but the matter is not certain, and I have seen no specimens. The Kheri experience shows that the produce of even the wild plant can be used as ganja at a pinch, and raises an inference that ordinary bhang could be smoked if ganja were not procurable.

18. The hemp plant is cultivated for its fibre in the Almora and Garhwal districts, and yields charas generally as a subsidiary product. Some description of the process will be found in the North-Western Provinces Gazetteer, Volume X, pages 760 and *seq* and 799 and *seq*. The information now supplied to me by the local authorities and gained by my own enquiries shows that the charas is extracted by rubbing in the hands the flowers of the female plant after it has been cut and scraping off the resin which adheres to them. A certain amount is also said to stick to the hands when the stalk is manipulated for preparation of the fibre, but this requires confirmation. No intentional effort seems to be made to keep the female plant from being fertilized, but the male plant matures a month or six weeks before the female plant, and is then cut to prevent deterioration of the fibre. Where the primary object of the cultivation is charas, the male plant is similarly removed to give the female room to spread. This practice may act to check fertilization, but obviously does not prevent it, as the female plants are said to always produce seed. Moreover, the wild plant grows round about and presumably its pollen would fertilize the cultivated plant. Charas is also extracted from the female flowers of the wild plant which must of course be fully fertilized. Such charas is esteemed to be of inferior quality. In a letter from the Political Agent and Superintendent of the Punjab Hill States it is said that in Bashahr a resin is extracted from the terminal leaves of the wild female plant by rubbing them between the palms of the hands till the resin adheres. It is then scraped off and smoked like charas. Each man makes his own in this fashion. This private manufacture of the drug in a small way is common. This account agrees exactly with the description given of the preparation of charas in the hill districts of these provinces and in Native Garhwal. Charas, which is a resinous secretion of the female flower, would seem scarcely distinguishable in its properties and effects from ganja, which is the female flower with its resinous secretion still present.

Imports and Exports.

19. The imports of bhang may be very briefly stated. Nearly the whole of the bhang consumed here is grown in the provinces. A certain amount is imported from the Punjab, coming chiefly from Jagadhri, Kalsia, Umballa, and some from Amritsar, Hoshiyarpur. Nearly all of it goes to a few of our western districts. This is not because of any failure in the local supply which is unlimited and inexhaustible, nor because of any superiority of the Punjab article, but apparently on account of the trade connection of some of the contractors with the Punjab. These imports are made under pass in the manner prescribed in rule 98, Chapter X, of the North-Western Provinces Excise Manual. No import duty is levied. A little bhang also occasionally comes from Bhartpur and Jeypur and perhaps from a few Bundelkhand Native States, but in that direction we give more than we get. The amount is not considerable and seems to be diminishing. Some of the bhang from Gonda and Bahraich is really grown on the Nepal side of the border. The Nepalese officials are said to exact a trifling duty of one or two annas per maund. The plant is treated in the same way as the growth of our own villages. A certain amount of bhang finds its way out of the provinces to the neighbouring districts of Bengal, the Punjab, the Central Provinces, and the Bundelkhand States.

20. The chief districts from which bhang is exported are Gonda, Gorakhpur, Bahraich, Basti, and Kheri, the Tarai (Naipi Tal), Bareilly, Pilibhit, Saharanpur, Gorakhpur, and Fatehgarh; but any of the other districts mentioned in my 8th paragraph are capable of yielding a practically unlimited supply, and bhang is occasionally procured from them. In Saharanpur a separate contract is given for a wholesale depôt. It only fetches a few hundred rupees and is almost invariably taken by the contractor for retail vend in the district. Elsewhere the local contractor does some business in wholesale export, or the contractors of other districts send their agents to purchase direct from the owners or occupiers of land who collect and store the plant.

This export, or, more correctly speaking, transport, within the provinces is effected under passes issued by the Collector of the district in the form printed as Appendix XL, in the North-Western Provinces Excise Manual, which is framed for opium, but also used for hemp-drugs. The rules will be found in chapter X of the Excise Manual.

21. The three main localities from which ganja is imported are—

1. Bengal.
2. Khandwa in the Central Provinces.
3. (*a*) Gwalior.
   (*b*) Bundelkhand Native States.

That imported from Bengal is almost exclusively the cheapest kind, "flat ganja." I believe some very small quantities of the superior kinds are occasionally imported, but I have never seen any. This import business is chiefly in the hands of a large Patna firm who hold contracts for several districts in these provinces and also supply other contractors. Some contractors, however, obtain their supplies direct from Patna, Rajshahi and Buxar, or from the border districts of Saran and Champaran. This is entirely a matter for their own choice. The Bengal Government impose a duty which is now Rs. 6 per seer on flat ganja. This is collected and credited in Bengal. Till the 1st April 1892 these payments were subsequently credited to this Government by inter-provincial adjustment. Since that date they remain to the credit of Bengal. The cost price varies considerably according to the character of the crop and the state of the market. Within the last two years it has been as high as Rs. 70 per maund and as low as Rs. 9.

The Bengal ganja is known here as "baluchar" from the name of a village in Bengal, whence it is supposed to come. It is used chiefly in the eastern districts forming the Benares and Gorakhpur Divisions, but a little still finds its way further west, where its superior quality secures for it a certain, though small, demand in spite of its much higher price. The high quality of the Bengal drug is universally admitted, and I believe that weight for weight it possesses greater intoxicating power. This point could be best determined by a chemical analysis. Its appearance would indicate that it contains more of the resinous secretion, but, so far as I know, it seems to be preferred on account of its flavour and less unpleasant after-effects. Notwithstanding its better reputation and its older trade connection, the Bengal drug is losing its hold in the market here. The decrease in Bengal exports attracted the attention of the authorities there, and I was asked about a year ago to ascertain the causes. The result of my enquiries was to show that the consumption of baluchar was falling off because of (1) the successive increases of the duty levied in Bengal and the consequent enhancement of price; (2) the increasing competition of the cheaper "pathar" ganja from the Central Provinces, Gwalior, &c.; (3) extended use of charas. No doubt cause (2) is greatly fostered by cause (1), and is a consequence as much as a cause. But I think in any case the cheaper drug was bound to assert itself and gradually supplant the dearer article. The difference in price is considerable. Baluchar has lately been generally retailed in our towns at six annas per tola, while pathar sells at one anna and half an anna.

22. In those districts where the use of baluchar prevailed I do not think the pathar ganja was, at first at least, openly offered under that name. It was rather used to adulterate baluchar. Ordinary specimens of the two are easily distinguishable to the experienced eye. But there is sufficient resemblance to make adulteration easy. I have no doubt a good deal of pathar is sold as baluchar. The Commission will remember that on their inspection of the two chief drug shops in Allahabad the vendors professed to have no "pathar" for sale, but on visiting the contractor's storehouse a quantity of pathar was there found in stock. Last year Babu Ganga Bishen, the head of the Patna family, and the largest contractor in the provinces, was found in the Nimar district engaging with the cultivators to manufacture their ganja so as to resemble baluchar and instructing them in the process. This had occurred also on a previous occasion. I have handed to the Commission a specimen of Khandwa ganja which I found on sale in a shop here and which approaches baluchar in quality and appearance. All these circumstances seem to indicate that the duty on Bengal ganja has reached a point which must lead to its gradual exclusion from a market where it has to compete with the cheaper products of other localities. I should also add that the districts in which there is reason to believe that locally grown ganja is surreptitiously prepared are chiefly districts in which baluchar is used.

In Garhwal a substance is produced and used which might be classed with either ganja or charas. After the charas has been extracted from the female flower the powdered or broken flowers are mixed with hemp seed and smoked in a chillum. This seems akin to the "garda" of the Punjab.

The ganja coming from the Central Provinces is known here as "pathar," "pattiyara or pattiyala," possibly on account of its leafy character. It has more waste in the shape of stalk and leaf and apparently less of the resinous secretion than the Bengal drug. But, as I have already said, it can be prepared to simulate the latter.

I need not here attempt to describe its method of cultivation, preparation, storage, wholesale price, &c., because such information can be more accurately procured from the Central Provinces. Our contractors who bring it from Khandwa pay no duty there, but have to meet warehouse and registration fees, which, I believe, come to about Rs. 2 per maund. It varies a good deal in quality according to the season and probably also according to the skill of the cultivators who grow and prepare it. Many of the specimens I see contain more or less seed, showing that the male plants have not been completely extirpated. Pathar, whether from the Central Provinces or Gwalior, &c., is most largely used in the central districts of these provinces and in those western districts where ganja is consumed at all. It is gradually making its way in the eastern districts, where it is supplanting baluchar. I do not think the import of Khandwa pathar is increasing just at present. The figures marginally noted show the imports for the last 10 years.

	Mds.		Mds.
1882-83	... 503	1887-88	... 1,145
1883-84	... 2,472	1888-89	... 1,879
1884-85	... 741	1889-90	... 3,237
1885-86	... 4,223	1890-91	... 1,530
1886-87	... 229	1891-92	... 1,450

From what some of our contractors have told me, I think Gwalior ganja has been gaining ground, as it has latterly been rather cheaper owing perhaps to bad crops in the Central Provinces and the heavier railway freight to many of our districts. The construction of the Indian Midland Railway has apparently improved the market for Gwalior ganja.

24. The Gwalior ganja is of the same character and appearance as the Central Provinces "pathar." It is known here by the same name and is used in the same places and by the same people, in fact it stands on exactly the same footing as the latter. Like the latter, too, it seems to vary considerably in quality. On an average I should say, it is neither better nor worse than that which comes from Nimar. It is the product of careful cultivation and preparation. Colonel Pitcher, Director of Land Records and Agriculture for the Gwalior State, has kindly supplied a memorandum on this point prepared by his Assistant, Pandit Gopal Ram, which will be found as an appendix to this report. The State duty of Rs. 5 per maund must be calculated on the drug stripped from stalk and waste and ready for use. My enquiries here show that our contractors pay duty to the farmer at the rate of Re. 1-8-0 to Rs. 2 per 100 bundles. The fact seems to be that the farmer, paying a lump sum to the State, collects the duty in the way he finds most convenient to all concerned, and is not very particular provided he gets a fair offer. The incidence of the duty on weight of the drug is very much a matter of conjecture or estimate. I have no doubt myself that the actual incidence on the cleaned stuff comes in the end to less than Rs. 5 per maund. Some of the contractors I have spoken to have been under the belief they paid less dues in Gwalior than Khandwa. The Gwalior ganja as a rule is despatched by rail from Antri on the Indian Midland Railway, The State is bound by treaty not to permit the export of intoxicating drugs, &c., by any route or direction formerly barred by the Inland Customs line. This restriction had been disregarded, but the attention of the Darbar was called to it in 1887, and they took measures to enforce it. The principal measure, curiously enough, was to double the duty on ganja exported to British territory. The convenience now afforded by the Indian Midland Railway, added to the above restriction, now confines the conveyance to the railway, but I have no doubt that if the inducement existed, it would be quite easy to smuggle in the drug at many points of our land frontier.

25. Of the same class as the Gwalior ganja is that imported from some of the Bundelkhand Native States. I give in the margin the name of those States from which ganja has been from time to time procured by our contractors. To these may be added Dholpur, which is under the Bhartpur agency. The plant is cultivated in Dattia, Sampthar, and Chattarpur to some extent, and the drug is not, so far as I could observe, distinguishable from Gwalior ganja. In all these States there is some duty on export, but it seems to be variable and unequal. In one place I am told it is two annas per rupee of the price of the drug which would be about Re. 1 to Rs. 2 per maund. In another place it is said to be Re. 1-9-0 on each purchase irrespective of quality. But these rates require confirmation. I am not sure that all the ganja brought from these States is of local growth; some of it, I suspect, comes from Gwalior or Khandwa originally. I learnt in Hamirpur that the Chirkari State supplies itself from Khandwa. I believe also that ganja as well as bhang finds its way from our districts into adjoining native territory. The import of ganja from these States is inconsiderable and irregular. It is only brought into a few of our Bundelkhand districts, but it is a source of supply which is capable of extension.

Dattia.
Sampthar.
Chattarpur.
Kadaura (Baoni).

26. Before quitting this part of the subject I ought to mention that these and other Native States not only adjoin, but are interlaced and intermixed with British territory. There are numerous native villages scattered over our districts, and in some cases considerable tracts entirely surrounded by British possessions. The capital and a great part of the Chirkari State is situated in the middle of the Hamirpur district. All these places serve as centres from which excisable commodities are freely smuggled into our territory. The country being wild and mountainous prevention is impossible.

I have elsewhere mentioned that a small quantity of very inferior illicit ganja is introduced from Nepal. I am told that there recently used to be authorized import of an inferior sort of ganja known as Mahadewa from Nepal; but I have been unable to verify this or get a specimen.

A little pathar ganja still comes from Indore. The supply from this quarter used to be large. Ganja of a potent sort is said to be also procurable in Rewah, but whether of local growth or imported from the Central Provinces is not clear.

A small amount of ganja is exported from Bahraich into Nepal. It is imported ganja.

27. I have mentioned all the sources, so far as I can discover, from which ganja is at present imported. But within recent years ganja in considerable quantities has been brought from places further south. Holkar's territory, Berar, Mewar, Nasik, Nasirabad, and Khandesh, and perhaps other places in the Bombay Presidency are sources from which supplies have been drawn within the last ten years. Latterly, however, the proximity of Khandwa and Gwalior and the cheapness of the drug there seem to have given them a monopoly of the business in pathar. But in considering the possible sources of supply, the places I have mentioned should not be overlooked.

28. The great bulk of the charas consumed in these provinces is brought from Yarkand and Bokhara. It comes through the Punjab, and the Commission can procure there better information than I can give them concerning its manufacture, quality, transport, &c. Some information on the subject will be found in my predecessor's letter of 29th August 1881 to the address of the Board of Revenue, of which a copy, I understand, has been supplied by the Board to the Commission. I am told by the traders that the charas from Central Asia is now less pure than it used to be. It is also much cheaper at present than it was some years ago, but the price is liable to considerable fluctuations.

29. The other sources of supply are Nepal and our own hill districts, Almora and Garhwal. A small amount also finds its way from Thibet into both British and Native Garhwal. A little is also sent from Garhwal into Thibet. The drug imported from Nepal is known as Shahjahani or Saljahani charas and is introduced through the Bahraich district from Nepalganj. A small amount is also introduced from Nepal into British Garhwal or Kumaun. I append a report by the Deputy Commissioner of Bahraich describing the method of production and manufacture. His information was, I believe, derived from the Nepalese frontier officials and the local traders. This charas is of a very superior quality and commands a high price; Rs. 10, 1st quality, and Rs. 3, 2nd quality, per seer. At present it seems all to go to Lucknow, where it is retailed at Rs. 35 or Rs. 40 per seer. Some used to be sent to Cawnpore. The importation appears to have fallen off, as the Yarkand charas has become cheaper, but its better quality still secures a market for the Shahjahani drug.

Dr. Watt states on the authority of Dr. Gimlette that Nepal charas sells in Katmandu for Rs. 2 and in the Tarai at Rs. 3 per tola (Rs. 160 and Rs. 240 per seer). If these figures are correct, they show how enormously the drug must be adulterated before it reaches our market. I remember once hearing that very superior Nepal charas has been sold in Lucknow at its own weight in gold. This source of supply could, no doubt, be again largely extended if the demand arose. I believe the amount at present imported is from 25 to 50 maunds a year.

30. The hemp plant, I should add, is also cultivated in the Native Hill State of Tehri Garhwal, but none of the products which include charas are said to be imported into our districts at present.

31. The whole of the charas produced in the Himalayan hill districts is locally consumed and is also supplemented by the import of Yarkand drug which is cheaper and which is said also to be gaining favour because it is more potent. I find it difficult to believe this latter statement because I have little doubt the Himalayan charas is much the purer. It has been described to me as milder (colder) and less injurious than the other. This can best be settled by a chemical analysis, and for this purpose I am procuring specimens, which will be submitted. Possibly the more pungent taste of the Yarkand charas may be due to substances with which it is adulterated. But that it contains more of the true hemp resin I find it difficult to believe. My predecessor appears to have been misled in describing the Kumaun charas as inferior. The price paid by the contractor is from Rs. 5 to 8 per seer, about twice or thrice the price of the imported charas. It is difficult to estimate the amount of the annual produce, as much of it is consumed by the people who make it, or is illicitly sold. So far as the contractors'

statements go only five or six maunds annually pass into their possession. This must be a small part of the produce, which, moreover, could be largely extended if there were a sufficient demand.

32. I have made many enquiries to ascertain if true charas is in these parts of India ever extracted from the plant grown in the plains. I have now got definite information of two localities in which this occurs. It was stated incidentally that some charas is made by the ganja cultivators in Gwalior. Colonel Pitcher has kindly verified this through his Assistant, Pandit Gopal Ram, who reports that "a certain amount of charas is obtained in this (Gwalior) State by scraping off the resin which adheres to the hands in cutting the ganja plant. In tahsil Antri the cultivators do not care much about the charas. In tahsil Kalaras, district Narwar, I hear charas is obtained in small quantities by the same process as in Kumaun and Garhwal." The second locality is in the Kumaun Tarai and Bhabar, where the practice was possibly introduced by the hill men who come down to cultivate there. The method is the same as that employed in the hills. The flowers of the wild plant are rubbed in the hands and the resin which adheres is scraped off. No record can be kept of the amount so prepared, but it does not as yet seem to be considerable. I have obtained specimens of this charas from both Gwalior and Kumaun, and will submit them to the Commission.

It is a fact of first-rate importance to know that charas can be and is manufactured in the plains and from the wild plant. This at once enlarges immensely the possible sources of supply. It has been stated that charas is collected in Sind and Central India by the traditional process of men, naked or leather clad, running through the hemp fields. The story seems to require verification. It seems strange that no charas is produced in all the handling which the Bengal ganja undergoes in the process of preparation.

Administration.

33. The excise on hemp-drugs is administered under Act XXII of 1881 and rules thereunder. The administration is carried on by the ordinary district staff. The central controlling authority is the Board of Revenue. The Commissioner of Excise has the power of a Revenue Commission under the Act. His statutory powers are limited to those defined in sections 54 and 14 of the Act. He has little initiative or final authority, and acts chiefly as an intermediary between Collectors and the Board. There is one uniform system of administering the drug revenue for the whole provinces. The right of sale over a fixed area is farmed to a contractor, who is at liberty to procure his drugs wherever he likes and to sell them at any price he chooses. No distinction is drawn between the different sorts of hemp drugs; all are included in the same license and are stored by the farmer on his own premises. There is no import duty here of any sort. The contracts are usually for an entire district—in some cases for tahsils or parganas. There is nothing to prevent a contractor having separate contracts for several districts. The ordinary period is for one year, but contracts are now often given for two or three years and the longer periods always fetch proportionally higher sums. The chief reason for this is that there is an enormous difference between the wholesale and retail prices, and an out-going contractor can flood the market with cheap drugs, which lessen the sales of the new contractor for weeks or months. The number and locality of the retail shop has been fixed by the Collector subject to the orders of the Board and is revised from time to time. Shops are only located in places where a demand exists. The maximum proportion is one to every 10,000 of the population. In a very few cases this is exceeded for special reasons. In more cases the proportion is less. In the tabular statement which accompanies this memorandum, the number of shops before 1878-79 cannot in many cases be stated, as the returns showed only the number of farms. A general revision of the number of drug shops was undertaken some time ago, and considerable reductions effected which will come into operation in the year now commencing (1893-94). For that year the total number of shops in the provinces is 3,673, being one for every 12,770 of the population. A list of the shops is notified at the time of sale, and no alterations are permitted without sanction. The contractor either sublets the shops or works them through his servants. As a rule, he holds the best shops in the large towns in direct management, and sublets the rest. He keeps the wholesale vend in his own hands and supplies his servants and sub-lessees, charging the latter at prices which leave him a large margin, and he makes his profits partly in this way and partly by requiring cash payments from sub-lessees. The shop licenses are all issued by the Collector on printed forms (Appendix XX, Excise Manual). When the contractor has made his arrangements, he applies to the Collector, filing a list which shows the names of the shops and licensees. This is compared with the sanctioned list of shops, and the licenses are made out in the Collector's office and given to the contractor. If he wishes at any time to change the retail vendor, he can do so by applying to the Collector and returning the first license.

I do not know of any case in which an objection was ever made on public grounds to the number or locality of drug shops. If any such objection were made, it would receive due consideration. The neighbours are not affected by the presence of these shops, as there is rarely any consumption on the premises.

34. The contracts are sold by auction in each district at the time of the other annual excise settlements. As a rule of course the highest offer is accepted, but it is sometimes found

necessary to arrange otherwise. Regard is paid to the solvency and respectability of the rival bidders. The Collector has always the prices of previous years to guide him, and is obliged to explain any substantial fluctuations. These depend on the competition, on the character of the season, and on the variations in the cost price of drugs. The number of capitalists engaged in the trade is not very large, and nothing is commoner among them than combinations to keep down the price. I have noticed this point in my annual report for 1891-92. Latterly, I think, the value of these contracts has become better known and the contractors' profits shorn to more reasonable dimensions. Measures have also been taken to defeat combinations, and with good results. Still it is a defect in the system that it leaves the whole of the revenue collected here to be determined by the competition of the auctions. The advantages of the system are that a large revenue is very easily and cheaply collected and that smuggling and other evasive or illegal acts are minimized. The contractor has no reason to commit them himself, and it is his interest to detect any one attempting them. This is no small advantage from an administrative point of view. Retail prices are under the existing system kept at the highest possible point.

35. The rules which govern the import of all forms of hemp-drugs will be found in the Excise Manual, Chapter X. All import, export, and transport is under passes signed or countersigned by the local authority. In the case of ganja and bhang the only importers are our own contractors. Charas is also brought in by Panjabi traders, who sell to those of our contractors who do not care to procure their supplies direct from the Panjab. These traders frequent a few centres to which they convey their stock. Their sales are all reported and duly registered on their passes. They take out no licenses as they sell only to contractors, for whose convenience they are permitted to trade in the manner described. The legality of this arrangement is questionable and will be considered when the rules come under revision. Some of these traders themselves hold district contracts, and in such cases of course their proceedings are open to no objection. Sometimes contractors, instead of importing from foreign provinces, obtain their supplies from contractors of other districts. This happens in the case of drugs in small demand or in the event of sudden emergencies. Such consignments are conveyed under pass. In these ways a good deal of transport of drugs takes place from one part of the provinces to another.

The amount of smuggling from outside the provinces is, I believe, quite inconsiderable: the reason is given above. A little ganja and charas finds its way over the frontier, no doubt at many points in the possession of travellers, fakirs, and the like, who chiefly bring it for their own consumption. Within the legal limits of possession* this cannot be prevented. I have no reason to believe that any illicit traffic or sale occurs which is worth taking into consideration. Occasionally drugs brought from one district are illicitly sold in another to the injury of the contractors. This can rarely be done without the connivance of some licensee of the district from which the drugs are brought, and is usually the result of hostility between rival contractors. The authority of the police and revenue staff is always exerted to suppress such practices.

* Ganja and charas, 5 tolas. Bhang, quarter seer.

But there is undoubtedly a considerable consumption of bhang and a certain, though small, consumption of ganja locally produced which pays no tax direct or indirect. How this happens will be sufficiently understood from what I have said in the earlier part of this memorandum. It would be difficult to check and impossible to wholly suppress this consumption. Illicit import would easily and rapidly increase if stringent measures were adopted to repress trade in, and consumption of, drugs.

CONSUMPTION.

36. In the tabular statement which accompanies this memorandum, the columns showing the quantities sold retail, are necessarily blank. Any record of the sort would have to be kept by the retail vendors, and, if it could be maintained at all, would be utterly untrustworthy. It follows, therefore, that statistics showing the amount of drugs actually consumed or retailed are nowhere available. This is inevitable. Where a commodity is issued as required, like opium or country spirits, from a Government depôt on payment of a fixed duty, such a record can be kept, and it may fairly be assumed that the whole amount issued is consumed within the year. But this is not the case with hemp-drugs. The amount consumed can only be inferred from the amount of imports and exports. This might not be correct for any one year, because the imports of one year are often consumed or exported in the next. But over a series of years the net imports of charas and ganja will afford a very fair indication of the consumption if allowance is made for waste and deterioration. In the case of hemp-drugs this is not inconsiderable, for they deteriorate rather rapidly. Even an accurate return of the import and transport of bhang would fail to show the true consumption, as there is a large amount locally grown of which no trustworthy return could be secured.

The statistics of import and export are, I regret to say, very defective. In the absence of any fixed duty and with a revenue determined solely by the license-fees no provincial record of the traffic has been kept up. An enquiry commenced a year and a half ago showed that

even complete figures for 1890-91 were not always available. Hence the fragmentary character of the details in columns 11 to 18 of the tabular statement required by the Commission. Even such figures as are available in the years anterior to 1891-92 must be received with caution, as I am not confident that allowance has been made for transfers from district to district, and there is much risk that the same drugs may have been counted twice and the provincial total thus exaggerated. More accurate figures and for a longer period could be furnished to show the total imports of ganja from Lower Bengal and the Central Provinces. But in the absence of correct information from the other sources of supply these are useless as an indication of the Provincial consumption. The official returns of bhang are peculiarly apt to be misleading. They give the imports and exports district by district, and, as bhang is moved a good deal about the provinces, there has been considerable opportunity for error as long as no regular register and return of the consignments was maintained. Moreover, these statistics can take no account of the bhang consumed in districts where it is grown. In the case of untaxed bhang this must always happen, and I doubt if any system of registration will secure very accurate returns of even the bhang which passes through the licensed dealers' hands.

The trade returns are of little value. An attempt to utilize them has shown that much of the imports and transports follow routes by which they escape registration.

37. The special enquiries which were made in 1881-82 give the amount of imported ganja to be approximately 4,451 maunds. The later and I think more trustworthy returns show a total import of 4,935 maunds in 1890-91 and 4,187 maunds in 1891-92.

The imports of charas are similarly shown to be 1,135 maunds in 1881-82, 1,091 maunds in 1886-87, and 1,286 maunds in 1887-88. For 1890-91 the returns show maunds 1,133-30-9 and for 1891-92 maunds 1,217-4-12.

Collating these figures, it might be reasonable to assume that the imports of ganja are between 4,000 maunds and 4,500 maunds yearly and the imports of charas between 1,100 maunds and 1,200 maunds.

These figures, however, exaggerate the actual consumption because, besides other reasons, there is good deal of waste. Both ganja and charas deteriorate by keeping and considerable quantities become useless from this cause. On the other hand there is a certain consumption of locally-grown drugs of both kinds which cannot be ascertained.

38. The average consumption per head of ganja is estimated by Babu Hem Chander Kerr at 1½ seers per annum. This appears to me a very high estimate. In the case of baluchar retailed at 6 annas per tola it would mean for an ordinary consumer an outlay of Rs. 45 per annum, a quite impossible figure. Ganja is generally smoked in company, and a pice worth will go round two, three, or more people. It is also smoked several times a day. I should put two pice a day or Rs. 11-6-6 per annum as the maximum possible per head. This would represent less than half a seer yearly in the case of baluchar. On the other hand, baluchar sells for half the price in the villages, though consumption there is relatively much smaller. Pathar sells for one anna or half an anna a tola, but more of it is used in each pipe. Two pice worth a day of this would represent about 4½ seers yearly at the latter, and 2¼ seers at the former price. Taking one thing with another and averaging all sorts of ganja, I should think a seer a head would be about the amount annually consumed by those who habitually indulge in the drug. This would give 180,000 consumers for the 4,500 maunds imported, if it were all used.

My observations go to show that those who use ganja and charas indulge in them habitually and regularly. The craving is perhaps not so dominant and the abandonment not so difficult as in the case of opium. But where they can be procured, they are, as a rule, regularly taken. This is not the case with bhang.

39. Concerning the average consumption of charas, I have received most conflicting statements. But every one agrees that a much smaller quantity of it makes a dose. I should say half a seer per head yearly would be a fair estimate. That would represent 92,000 consumers of the 1,150 maunds imported.

These figures are on the basis of habitual consumption and would be susceptible of increase if there were many occasional consumers. But on the other hand considerable abatement must be made for drugs imported, but not consumed. I submit these calculations with much diffidence, for I am aware that anything like absolute accuracy is unattainable. They are framed on the highest scale, and would show that even so computed only a very small proportion of the population is addicted to the use of these drugs.

40. The use of bhang is much more general. It is also much more harmless or even positively beneficial. I am informed that in Bengal Dr. Prain has pronounced bhang to be more harmful than ganja. I have not been favoured with a copy of his report, and so I cannot examine his reasons, which may be peculiar to Bengal. But I can affirm with much confidence, as the result of repeated enquiries, both official and private, and of personal observations extending over many years, that bhang as used in these provinces is not only the least harmful

of all forms of hemp-drugs, but is largely used and much esteemed as a tonic by very many people who do not take it for its intoxicant effects and who only use it at certain seasons and in certain states of health. I cannot frame any estimate of the number of bhang consumers. Only a portion of those who use it, take it regularly all the year round and it is used in very variable quantities. There is no safe estimate of the amount consumed, and it is used for other purposes than human consumption.

41. The returns showing the annual revenue from hemp-drugs are complete and some deductions may be drawn from them. To facilitate this I append an abstract statement showing the district and provincial revenues since 1873-74.

Revenue from Hemp Drugs from 1873-74—1892-93.

Districts.	Years.					
	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.
N.-W. PROVINCES.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Dehra Dun	6,500 0 0	6,500 0 0	11,000 0 0	5,400 0 0	8,000 0 0	7,000 0 0
Saharanpur	7,290 0 0	6,022 0 0	7,170 0 0	7,310 0 1	6,160 0 0	7,300 0 0
Muzuffernagar	2,244 13 11	2,331 0 0	2,390 0 0	2,820 0 0	1,968 0 0	2,519 4 9
Meerut	11,588 12 0	10,950 0 0	11,346 0 0	12,410 0 0	11,298 6 0	10,938 3 6
Bulandshahr	3,874 8 0	4,197 8 0	5,398 8 0	4,405 1 0	3,946 9 0	3,969 6 0
Aligarh	10,390 10 7	7,856 8 0	9,150 0 0	8,942 8 0	5,475 0 0	8,577 8 0
Muttra	10,021 4 0	6,764 0 0	6,954 0 0	7,026 4 0	5,840 0 0	7,000 0 0
Agra	12,324 12 0	13,445 0 0	15,128 0 0	15,390 0 0	11,552 0 0	12,870 0 0
Farrukhabad	16,233 10 0	14,726 15 0	17,280 5 10	15,275 0 2	10,907 12 0	17,407 14 1
Fatehgarh (Cantonment)... ...	1,515 0 0	2,009 8 0	1,464 0 0	...	...	...
Mainpuri	7,456 2 9	7,230 0 0	7,020 0 0	7,545 2 0	4,410 0 0	7,480 0 0
Etawah	9,620 8 0	7,981 7 0	7,968 12 0	8,417 13 0	8,720 4 0	9,798 0 0
Etah	7,315 0 0	6,945 0 0	6,410 0 0	6,500 0 0	3,275 0 0	6,205 0 0
Bareilly	18,176 0 9	16,167 15 8	15,504 0 0	18,980 0 0	19,345 0 0	18,636 0 0
Bijnor	4,674 4 0	4,675 0 0	4,815 9 8	4,881 12 9	3,709 1 11	4,547 8 6
Budaun	9,960 0 0	9,970 0 0	9,645 0 0	8,865 0 0	3,400 0 0	8,674 0 0
Moradabad	7,547 6 9	5,682 13 0	8,001 0 0	8,001 0 0	3,601 0 0	5,626 0 0
Shahjahanpur	10,482 1 3	8,623 11 9	8,903 12 9	9,233 1 9	7,658 6 4	6,082 9 2
Pilibhit	...	...	...	...	...	...
Cawnpore	*23,725 0 0	23,725 0 0	23,790 0 0	27,010 0 0	23,360 0 0	33,200 0 0
Fatehpore	4,800 0 0	7,025 0 0	8,450 0 0	7,600 0 0	5,000 0 0	6,750 0 0
Banda	3,650 0 0	3,900 15 0	5,750 6 9	5,077 5 5	4,445 8 6	4,569 4 3
Hamirpur	4,666 0 0	3,400 0 0	3,167 12 7	2,561 8 8	3,587 0 0	2,957 8 0
Allahabad	21,660 0 0	21,660 0 0	20,862 0 0	24,455 0 0	32,376 0 0	27,740 0 0
Jhansi	858 0 0	948 11 0	1,023 10 9	945 0 0	715 0 0	980 0 0
Lalitpur	†758 8 10	352 12 0	594 0 0	673 0 0	436 0 0	635 10 8
Jalaun	3,753 8 0	2,552 4 0	3,515 0 0	3,605 0 0	2,881 4 0	2,321 9 4
Benares	48,000 0 0	51,000 0 0	45,290 5 9	49,000 0 0	44,000 0 0	54,000 0 0
Mirzapur	20,184 0 0	21,816 0 0	24,692 0 0	21,308 0 0	23,000 0 0	26,158 0 0
Jaunpur	11,501 0 0	7,500 0 0	12,527 1 4	14,000 0 0	10,200 0 0	11,617 0 0
Ghazipur	‡12,750 0 0	11,250 0 0	14,100 0 0	14,100 0 0	14,100 0 0	17,834 0 0
Ballia	...	...	...	...	...	...
Gorakhpur	7,872 6 9	9,156 0 1	10,100 4 0	14,393 12 0	11,190 0 2	13,025 0 0
Basti	4,500 0 0	2,528 1 9	2,343 11 0	3,000 0 0	3,100 0 0	3,300 0 0
Azamgarh	7,650 0 0	6,375 0 0	7,650 0 0	9,600 0 0	9,600 0 0	11,866 10 8
Kumaun	4,090 12 0	4,322 4 0	4,210 0 0	3,951 6 0	3,715 10 0	3,074 10 0
Garhwal	600 0 0	610 0 0	645 0 0	475 0 0	304 0 0	292 8 0
Tarai	3,112 0 0	3,153 5 4	2,835 0 0	2,653 6 5	1,389 4 3	1,546 0 0
TOTAL ...	3,41,346 1 7	3,23,353 11 7	3,47,095 4 5	3,55,811 1 3	3,12,666 2 2	3,66,499 2 11
OUDH.						
Lucknow	23,356 4 8	24,364 0 10	22,902 1 11	24,650 0 0	16,140 0 0	16,880 0 0
Unao	11,867 13 11	13,987 7 8	14,378 0 9	15,272 8 0	11,841 10 8	12,100 0 0
Rai Bareli	4,412 2 10	5,533 1 7	6,174 6 0	7,417 14 0	5,697 8 6	7,515 12 6
Sitapur	2,380 5 2	3,150 3 4	3,607 2 6	3,602 6 7	2,964 8 2	4,425 14 2
Hardoi	9,625 15 3	9,042 11 4	8,829 2 7	8,650 3 0	6,184 12 0	8,250 0 0
Kheri	1,340 0 0	1,246 0 0	2,176 0 0	1,836 9 0	1,383 6 6	1,302 8 0
Fyzabad	3,649 3 10	3,134 2 9	6,164 1 4	7,861 2 7	4,566 10 8	7,100 0 0
Gonda	523 2 0	697 8 0	604 8 0	610 10 7	598 10 8	688 5 4
Bahraich	827 14 10	738 14 6	893 12 0	1,085 4 0	710 9 9	1,005 12 0
Sultanpur	2,231 6 4	2,124 9 8	2,545 8 0	2,939 0 0	1,531 0 0	1,942 0 0
Partabgarh	2,100 0 0	2,808 5 4	3,775 0 0	3,335 5 7	2,150 0 0	2,200 0 0
Bara Banki	4,162 7 6	4,793 5 4	4,857 13 8	4,354 5 6	4,553 5 6	3,516 6 11
TOTAL ...	66,476 12 4	71,620 6 4	76,907 8 9	81,615 4 10	58,327 2 5	66,926 10 11

* Constituted a separate district from 1st November 1879.
† Abolished as a separate district from 1891. Revenue included in Jhansi.
‡ Constituted separate district from 1st November 1879.

Revenue from Hemp Drugs

Districts.	Years					
	1879-80.	1880 81.	1881-82.	1882-83.	1883-84.	1884-85.
N.-W. PROVINCES.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Dehra Dun	8,365 0 0	7,000 0 0	8,166 10 8	7,933 5 4	7,983 5 4	10,267 10 8
Saharanpur	7,326 10 8	6,462 8 0	6,561 0 0	7,249 2 8	8,786 10 8	10,133 5 4
Muzuffernagar	2,000 0 0	2,320 0 0	3,110 0 0	3,041 0 0	3,014 0 0	3,528 0 0
Meerut	10,735 0 0	11,953 12 0	14,513 12 0	17,604 0 0	14,516 0 0	16,425 0 0
Bulandshahr	4,071 12 0	3,660 0 0	4,110 0 0	5,016 0 0	5,600 0 0	4,836 0 0
Aligarh	8,735 0 3	7,300 0 0	7,240 13 4	7,183 14 8	8,368 5 4	8,727 14 8
Muttra	6,000 0 0	6,366 10 8	8,183 5 4	6,750 0 0	11,433 5 4	8,583 10 8
Agra	11,965 5 1	10,913 15 8	10,316 10 8	9,916 10 8	13,466 10 8	12,450 0 0
Farrukhabad	17,870 12 3	13,140 3 8	13,395 7 1	14,267 8 6	15,020 13 0	14,661 9 3
Fatehgarh (Cantonment)... ...	...	...	...	...	...	...
Mainpuri	7,737 2 8	7,519 13 4	7,976 0 0	9,533 5 10	8,794 0 0	8,429 0 0
Etawah	8,494 4 0	8,836 0 0	8,760 0 0	8,760 0 0	8,559 4 8	9,498 0 0
Etah	4,754 13 3	6,334 0 0	5,245 6 0	4,936 0 0	5,141 0 0	5,660 0 0
Bareilly	16,218 4 9	10,422 0 0	12,391 2 8	11,079 8 0	10,291 8 0	11,722 13 4
Bijnor	3,838 2 0	3,742 0 0	4,729 4 0	5,422 6 0	6,578 0 0	7,300 5 4
Budaun	9,158 10 8	7,120 5 4	7,408 0 0	6,826 0 0	6,732 4 0	8,834 8 0
Moradabad	5,001 0 0	6,403 0 0	6,081 0 0	6,004 0 0	6,183 0 0	6,893 0 0
Shahjahanpur	8,484 0 0	8,007 0 0	6,729 0 0	6,780 0 0	7,427 0 0	9,584 0 0
Pilibhit	684 6 0	4,125 4 2	4,178 7 10	4,136 13 0	3,721 14 0	3,346 0 0
Cawnpore	*26,000 0 0	26,000 0 0	30,304 0 0	30,473 0 0	32,694 0 0	43,037 10 8
Fatehpore	4,583 5 4	6,166 10 8	6,000 0 0	6,666 10 8	9,500 0 0	7,083 5 4
Banda	4,114 14 7	5,345 15 2	4,730 12 0	6,524 8 0	7,156 1 0	8,793 8 0
Hamirpur	3,419 8 6	2,858 4 8	4,153 11 4	4,383 5 4	3,617 13 4	4,742 13 4
Allahabad	33,062 0 6	31,390 0 0	31,390 0 0	31,939 0 0	34,770 0 0	34,675 0 0
Jhansi	1,268 0 0	1,052 8 0	1,340 8 0	1,287 0 0	1,459 0 0	1,656 0 0
Lalitpur	†696 5 4	743 5 6	876 0 0	1,051 1 2	1,136 1 4	1,431 3 8
Jalaun	3,039 2 6	3,048 8 0	2,902 0 0	2,700 0 0	2,855 0 0	2,841 0 0
Benares	42,100 0 0	42,900 0 0	44,200 0 0	40,890 0 0	44,910 0 0	42,000 0 0
Mirzapur	24,442 0 0	24,125 0 0	18,375 0 0	24,500 0 0	29,200 0 0	25,000 0 0
Jaunpore	9,167 0 3	13,191 0 0	11,675 0 0	19,783 0 0	17,917 0 0	16,509 0 0
Ghazipur	‡13,174 0 0	9,702 0 0	13,340 0 0	14,450 0 0	19,870 0 0	13,964 0 0
Ballia	917 0 0	7,983 0 0	11,684 0 0	14,269 0 0	14,550 0 0	11,334 0 0
Gorakhpur	12,173 0 0	17,063 8 0	21,502 8 0	25,520 0 0	27,678 7 0	28,020 0 0
Basti	4,050 0 0	5,250 0 0	7,500 0 0	12,000 0 0	8,662 8 0	9,937 8 0
Azamgarh	9,625 0 0	9,583 5 4	12,208 5 5	20,766 10 8	23,300 0 0	21,333 5 4
Kumaun	2,841 8 8	3,467 11 4	4,322 2 8	3,670 1 5	4,173 2 6	4,097 1 5
Garhwal	629 8 0	625 0 0	450 0 0	680 0 0	835 0 0	700 0 0
Tarai	1,825 0 0	1,530 0 0	2,191 0 0	1,890 0 0	2,455 0 0	2,072 0 0
TOTAL ...	3,38,567 8 9	3,43,652 5 6	3,68,440 15 0	4,05,882 15 11	4,38,356 2 2	4,40,116 5 0
OUDH.						
Lucknow	17,776 0 0	17,829 0 0	20,000 0 0	21,300 0 0	27,637 0 0	29,150 0 0
Unao	15,167 0 0	13,333 0 0	14,542 0 0	15,791 0 0	18,001 0 0	12,991 0 0
Rai Bareli	5,556 4 0	6,168 12 0	9,675 0 0	9,500 0 0	12,334 0 0	9,166 0 0
Sitapur	3,591 2 10	4,643 11 4	5,938 10 9	7,045 12 0	8,859 11 8	9,895 9 0
Hardoi	7,675 0 0	8,550 0 0	8,575 0 0	8,734 0 0	9,581 0 0	12,816 0 0
Kheri	1,620 7 0	2,023 9 0	1,930 0 0	2,350 0 0	2,676 0 0	3,036 0 0
Fyzabad	6,800 0 0	7,850 0 0	10,450 0 0	11,025 0 0	12,729 2 8	9,270 13 4
Gonda	1,083 5 4	1,186 10 8	2,177 10 8	2,749 13 6	3,822 7 10	2,145 13 4
Bahraich	701 12 0	1,295 0 0	1,468 0 0	1,028 0 0	1,567 0 0	1,729 0 0
Sultanpur	1,558 0 0	2,350 0 0	3,083 5 4	2,400 0 0	4,583 11 0	4,583 0 0
Partabgarh	4,425 0 0	3,625 0 0	4,000 0 0	4,560 0 0	5,710 0 0	6,500 0 0
Bara Banki	3,546 11 10	3,791 10 8	5,167 8 0	5,420 13 4	7,499 8 0	7,880 0 7
TOTAL ...	70,500 11 0	72,646 5 8	87,007 2 9	91,904 6 10	1,15,000 9 6	1,09,163 4 3

* Constituted a separate district
† Abolished as a separate district
‡ Constituted separate district

from 1873-74—1892-93—(concluded).

1885-86.	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p	Rs. a. p.
11,366 10 8	13,608 5 4	11,080 0 0	10,020 0 0	13,750 0 0	10,650 0 0	9,000 0 0	12,200 0 0
10,862 8 0	11,800 0 0	11,104 2 8	14,358 5 4	12,641 10 8	11,650 0 0	11,700 0 0	11,810 0 0
4,218 0 0	3,960 0 0	3,957 0 0	4,223 0 0	4,990 0 0	4,200 0 0	4,500 0 0	4,500 0 0
17,337 8 0	18,615 0 0	18,666 0 0	18,615 0 0	21,980 0 0	18,100 0 0	18,550 0 0	18,300 0 0
4,962 0 0	4,700 0 0	5,228 0 0	5,422 0 0	4,800 0 0	4,916 10 8	5,483 5 4	5,400 0 0
9,475 0 0	9,475 11 7	9,567 11 7	13,212 8 0	10,520 13 4	8,552 10 8	9,299 8 0	10,550 0 0
11,083 0 0	9,083 5 4	9,483 10 8	9,553 13 4	9,937 8 0	9,925 0 0	8,500 0 0	8,500 0 0
16,116 10 8	17,950 0 0	13,916 10 8	18,708 5 4	16,375 0 0	18,850 0 0	20,416 10 8	20,100 0 0
13,037 10 8	14,649 7 6	12,466 13 0	15,156 14 0	14,023 2 0	13,526 10 0	12,204 0 0	12,912 0 0
...	...	...	...	...	...	...	...
8,073 0 0	8,521 0 0	7,682 0 0	7,510 0 0	7,630 0 0	8,820 0 0	7,485 0 0	8,010 0 0
11,586 15 0	10,829 14 10	8,137 10 0	11,281 0 0	9,513 0 0	8,716 0 0	10,742 0 0	9,250 0 0
6,294 0 0	5,314 0 0	7,403 0 0	6,539 0 0	6,485 0 0	6,763 0 0	5,452 0 0	6,035 0 0
14,913 0 0	18,824 0 0	18,811 0 0	19,255 0 0	23,042 0 0	24,360 0 0	27,987 0 0	28,100 0 0
7,177 8 0	8,048 0 0	6,386 0 0	8,112 8 0	11,035 0 0	9,790 0 0	8,270 0 0	8,520 0 0
11,085 15 0	11,873 6 0	9,996 14 0	11,883 1 6	13,037 15 2	9,696 0 0	10,197 0 0	10,285 0 0
7,351 0 0	7,970 0 0	9,717 10 2	11,791 0 0	10,418 0 0	9,850 0 0	9,200 0 0	9,700 0 0
10,323 0 0	12,261 0 0	14,883 0 0	15,225 0 0	17,571 0 0	16,781 0 0	17,923 12 0	20,550 0 0
3,558 0 0	4,103 0 0	3,458 0 0	5,200 0 0	6,255 0 0	6,271 0 0	6,249 0 0	8,900 0 0
42,213 5 4	46,500 0 0	47,067 0 0	34,201 0 0	46,860 0 0	47,640 0 0	54,750 0 0	45,333 0 0
7,500 0 0	7,500 0 0	7,700 0 0	8,700 0 0	8,700 0 0	9,750 0 0	16,708 5 4	14,500 0 0
7,579 14 0	7,833 4 0	6,054 4 0	6,332 7 6	5,481 7 0	6,266 10 0	6,824 12 6	6,000 0 0
3,771 10 8	4,272 0 0	4,134 9 0	3,983 7 0	3,407 0 0	3,668 0 0	3,306 0 0	3,333 0 0
28,880 0 0	42,600 0 0	34,775 0 0	40,000 0 0	40,683 5 4	39,583 5 4	37,333 5 4	39,100 0 0
1,885 0 0	2,039 15 0	1,953 0 0	2,545 0 0	3,282 0 0	4,405 0 0	4,324 12 0	4,136 0 0
1,280 0 4	1,766 4 0	1,705 0 0	1,769 0 0	1,462 0 0	...	...	...
3,131 0 0	3,068 0 0	3,178 0 0	2,989 0 0	3,047 0 0	2,741 0 0	2,752 0 0	2,475 0 0
42,000 0 0	42,000 0 0	35,000 0 0	44,000 0 0	44,000 0 0	44,000 0 0	50,600 0 0	45,600 0 0
26,000 0 0	26,000 0 0	26,000 0 0	28,666 10 8	28,666 10 8	28,666 10 8	21,000 0 0	24,000 0 0
17,291 0 0	21,583 5 4	23,558 5 4	20,292 5 4	22,866 0 0	24,238 0 0	21,937 0 0	22,200 0 0
12,833 0 0	13,033 0 0	14,334 0 0	20,000 0 0	20,000 0 0	19,367 0 0	15,817 0 0	14,500 0 0
11,500 0 0	11,500 0 0	11,916 0 0	14,000 0 0	14,000 0 0	14,166 0 0	14,417 0 0	13,300 0 0
27,060 0 0	27,388 12 0	29,322 8 2	33,794 12 3	29,873 0 0	24,223 12 0	23,846 7 0	25,000 0 0
12,031 4 0	14,525 12 0	14,320 0 0	18,826 0 0	15,512 0 0	12,666 0 0	12,136 0 0	11,900 0 0
23,833 5 4	29,083 5 4	17,250 0 0	23,000 0 0	21,500 0 0	21,500 0 0	16,500 0 0	16,500 0 0
4,950 9 1	4,263 13 5	4,777 14 8	5,238 10 9	6,172 9 0	6,185 6 7	2,087 1 9	860 0 0
800 0 0	1,130 0 0	1,655 0 0	1,879 1 0	1,548 13 8	1,864 9 4	1,124 9 8	1,245 0 0
2,187 0 0	2,635 0 0	2,535 0 0	3,260 0 0	3,490 0 0	3,160 0 0	7,690 0 0	8,684 0 0
4,55,548 3 9	5,00,357 14 1	4,69,180 11 11	5,19,543 14 0	5,34,556 14 10	5,15,509 5 3	5,16,313 9 7	5,12,288 0 0
31,214 0 0	27,251 0 0	32,801 0 0	26,174 0 0	31,100 0 0	26,466 10 8	28,583 5 4	30,000 0 0
30,350 0 0	27,431 0 0	32,777 5 4	33,389 5 4	37,961 5 4	28,183 0 0	28,850 0 0	30,100 0 0
19,918 0 0	17,250 0 0	13,332 0 0	23,587 7 1	20,000 0 0	15,500 0 0	18,600 0 0	21,500 0 0
10,117 6 2	9,720 14 1	12,067 5 4	12,136 13 4	13,844 13 4	16,595 0 0	20,150 0 0	17,350 0 0
12,000 0 0	16,350 0 0	18,675 0 0	21,709 0 0	20,500 0 0	23,100 0 0	26,275 0 0	23,600 0 0
3,034 0 0	3,476 0 0	4,774 8 0	5,625 8 0	7,042 0 0	8,458 0 0	10,342 0 0	11,000 0 0
9,325 0 0	23,138 14 4	19,833 6 0	19,697 13 0	19,163 5 4	16,666 10 8	16,100 0 0	17,000 0 0
2,833 5 4	4,127 8 0	4,283 0 0	5,027 0 0	4,800 0 0	4,925 0 0	4,625 0 0	1,800 0 0
2,150 9 9	2,620 6 3	2,450 0 0	2,154 0 0	2,678 0 0	2,521 0 0	2,352 0 0	2,050 0 0
11,800 0 0	8,475 0 0	9,875 0 0	12,967 0 0	10,740 8 0	12,780 0 0	11,579 8 0	12,100 0 0
4,468 14 2	15,898 10 8	12,300 0 0	11,167 5 4	16,666 0 0	10,000 0 0	13,500 0 0	15,000 0 0
10,413 13 4	14,508 5 4	16,083 5 4	15,325 0 0	12,300 0 0	11,510 0 0	14,816 10 8	13,000 0 0
1,47,625 0 9	1,70,247 10 8	1,79,251 14 0	1,88,960 4 1	1,96,796 0 0	1,76,705 5 4	1,95,773 8 0	1,92,500 0 0

from 1st November 1879.
from 1891. Revenue included in Jhansi.
from 1st November 1879.

It is necessary, however, to remember that abnormal figures which appear in this table are in some instances due to the method of keeping accounts on which the Accountant-General's Department insists. For instance, some part of the unusual increase in 1886-87 is caused by the inclusion in the returns for that year of the security advances made on account of the following year. In the previous year the sums shown were those paid on account of the year of report. In the last year 1892-93 these security advances for 1893-94 are not shown, as they had not been made when the statement was compiled. In some cases, again, security advances have been refunded where sanction to a contract has been refused by higher authority, but the sums have still to appear in the accounts. I must also observe that these figures do not take account of the very large revenue collected in Bengal on ganja consumed in these provinces, and which from 1884 to 1892 was credited to us by inter-provincial adjustment though it was not reported to this Department and does appear in our Excise returns. In 1889-90 this was as much as Rs. 1,37,741, but has since fallen off.

42. Still these figures on the whole give a fairly correct view of the progress of the provincial revenue from this source. In the twenty years since 1873 the receipts have grown from Rs. 4,07,822 to Rs. 7,06,788, or over 73 per cent. In Oudh the increase has been over 193 per cent., in the N.-W. Provinces it has been 50 per cent.

For this increase I assign three causes:—

1st.—Increased general prosperity which has shown itself in a larger expenditure on excisable commodities.

2nd.—Better administration, which has secured a larger proportional revenue from the amounts consumed.

3rd.—An increased use of hemp-drugs.

These causes are, of course, mutually co-related.

That the causes in operation have not affected hemp-drugs alone is clear from the fact that there has been a similar growth in other branches of excise revenue. The receipts from country spirits have increased between 1873 and 1892 from Rs. 11,70,242 to Rs. 21,16,977 in the N.-W. Provinces and from Rs. 5,52,364 to Rs. 11,04,949 in Oudh, a gross increase of 87 per cent. In the case of spirits at least this revenue is gained not on a larger, but on a smaller consumption. Owing to the extension of the distillery system and to administrative improvements, which have checked fraud and peculation, the gallonage has actually diminished, while revenue has increased.

43. The first substantial increase of drug revenue began in 1881-82. After that it was, though more irregular in Oudh than the N.-W. Provinces, continuous and rapid for both provinces. This movement must, in my opinion, be associated with the reforms which originated with the Excise Committee of 1877. Some of these had a direct effect on hemp-drug revenue. For instance, a most important measure was to place the Excise Department of each district in charge of a selected Covenanted Assistant Collector. The contract system requires particularly efficient and honest management, which was thus secured. It is a matter of regret that the depletion of the Covenanted European Staff has latterly led to this salutary measure falling a good deal into abeyance. There are many indications in the tabular statement that contracts used, for one reason or another, to be given in some cases for much below their real value. Without multiplying instances I may point to Unao, Rai Bareilly, and Sultanpur in 1885-86, where the revenue rose at one bound from Rs. 12,991 to Rs. 30,350 from Rs. 9,166 to Rs. 19,918, and from Rs. 4,583 to Rs. 11,800, or to Partabgarh in 1886-87, where, after allowing for advance payments, the revenue jumped from Rs. 4,469 to Rs. 11,483. In all these cases the higher revenue has since been fairly sustained. These and such like instances indicate leakage, which has since been stopped. In some cases, as in Azamgarh in 1882-83, a large enhancement was gained by granting separate contracts for each tahsil and so admitting competition. The annexation to Oudh of the N.-W. Provinces seems to have been followed by better methods, which partly account for the more rapid growth of the drug revenue in the former province.

44. Some of the measures of excise reform have indirectly affected drugs by raising the price of country liquor. It seems to me impossible to doubt that restrictions on the use of spirits, either in the shape of prohibitive prices or diminished supply, tend to stimulate the use of drugs. I have dealt with this point in my Annual Reports for 1890-91 and 1891-92. I find running through all the Excise Reports for many years past assertions that drugs have been taking the place of liquor. I may point here to a few specific instances which seem to confirm that view. It will be seen that the drug revenue fell in certain districts of the Rohilkhand Division (Bareilly, Shahjahanpur, Budaon), during the years 1880-81 to 1883-84. The reason of that fall was that outstills were introduced at the beginning of that period into portions of these districts, and liquor in such areas became cheap and accessible. At the close of the period the outstills were abandoned, and this, coupled with other changes, made liquor again dear, and the supply scanty. On this the drug revenue at once revived. Within the last two years the contraction of the outstill area in Bijnor and Pilibhit and the enhancement of the still head duty on distillery liquor has been followed by an increased importation of charas and an enhancement of the drug revenue. The same phenomenon has been observed in other parts of the provinces.

The history of the Banda district is also a case in point. During the years 1864-71 the distillery system was in force. The drug revenue then averaged Rs. 7,661, rising in 1870-71 to Rs. 8,090. The distillery system was condemned as unsuitable to the district and was abandoned in favour of the outstill or farming system. The drug receipts fell in 1872-73 to Rs. 4,256, and in 1873-74 to Rs. 3,650, and notwithstanding the general provincial improvement are now below Rs. 6,000. The fall of drug revenue in 1872-73 is due altogether to the change of system which made country liquor again accessible to the people.

In the North-Western Provinces the most marked increase of drug revenue has been in the eastern districts belonging to the Gorakhpur and Benares Divisions. These are the districts in which the habit of spirit-drinking was most prevalent and where the enhancement of price and curtailment of supply under the Central Distillery System has been most severely felt. Before the introduction of that system these districts furnished 40 to 50 per cent. of the total revenue of the North-Western Provinces from country spirits. I find that in 1862-63, when the system was introduced, the percentage was 48. The percentage of the total provincial revenue from hemp-drugs furnished by the same area in that year was only 18. In 1890-91 the former percentage had fallen to 31 and the latter had risen to almost 32. In 1862-63 the drug contract for the Benares district was Rs. 7,000: in 1890-91 it had risen to Rs. 44,000.

Oudh was essentially a spirit-drinking province. The consumption was everywhere large. The administrative changes have affected it more than the North-Western Provinces. In Oudh the S. H. D. before 1877 was 12 annas per gallon, in the North-Western Provinces it was Re. 1-8. In that year a uniform duty of Re. 1 was imposed in both provinces. The figures already quoted show that while the drug revenue of the North-Western Provinces has increased by Rs. 50 per cent., that of Oudh has increased by Rs. 193 per cent. Meanwhile the liquor revenue from Oudh has increased by Rs. 100 per cent. only. A reference to the tabular statement will show the very low incidence of drug revenue in the Bundelkhand districts where the outstill system is in force.

I am unwilling to prolong this memorandum by accumulating figures and arguments on this point. But it is one which seems to me to deserve the most serious consideration. Facts, figures, and opinions point irresistibly to the conclusion that the measures which have been taken to restrict the supply of country spirits and increase the revenue from it have tended *pari passu* to stimulate the use of drugs. If it be admitted that so long as human nature remains unchanged, some form of stimulants will be used, it follows that any measures to restrict drugs will be only half successful unless they are accompanied by measures which will render less harmful stimulants more accessible.

It is necessary to remember that even behind hemp-drugs there are deeper depths. Dhatura, strychnine, aconite, and other poisons may occupy the field from which spirits and hemp-drugs are excluded.

45. There is one other matter which I would like to mention before quitting the subject of the provincial revenue from hemp-drugs. In his otherwise admirable monograph on the hemp plant, the author of the Dictionary of Economic Products has committed himself to many severe strictures on the fiscal and administrative policy of this Government. I have no hesitation in asserting that he has been largely misled by fallacious conclusions from erroneous statistics. It would be out of place here to enter into a detailed examination of his errors, some of which lie on the surface. But as his work is, no doubt, in the hands of the Commission, I would venture to record a warning against accepting either its statistics or its conclusions as far as these provinces are concerned without a careful scrutiny or without a reference to those who could explain supposed anomalies or defects.

Prices.

46. I have at various places mentioned the current prices of the different drugs. I here give them in collective form. The wholesale prices are those at which the contractors procure them. The retail prices are those at which the public buy them. There is a third set of prices at which contractors supply their sub-licensees, but these are merely for the adjustment of accounts. The retail prices are only approximate. They vary very widely from place to place. Besides district variations, prices are often twice or thrice as high in large towns as in rural parts. They are also lowest at the borders of districts where they come into competition with the drugs of other vendors. Prices also vary with the amount purchased. When sold by weight in any quantity, the drug is cheaper; when sold in made up packets or doses, the price is higher. I doubt if retail prices vary much from year to year. The vendors in every year charge as much as they can get, and as the difference between cost prices and retail prices is enormous, there is always a large margin of profit. A rise of cost price comes out of the profits of the contractor or the Government revenue, or both. But wholesale prices vary very much from year to year, according to the supply and demand and to the duty which may be imposed on the produce or in transit. The prices here given are those now current. It is hardly necessary to add that all prices vary with the quality of the articles sold. These drugs deteriorate rapidly and are often sold off at nominal prices, a circumstance which will frequently account for the extraordinary discrepancies in reported rates.

BHANG.

SELF-GROWN FROM SUB-MONTANE AND HILL DISTRICTS.

Wholesale.

Re. 1 to Rs. 2 per maund besides cost of railway freight.

Retail.

Generally one to two annas per quarter seer (Rs. 10 to Rs. 20 per maund). In large towns it goes higher, reaching as much as Re. 1 per seer.

TATIA FROM FARAKHABAD.

Wholesale.

Rs. 4 to Rs. 6 per maund besides freight.

Retail.

Two to four annas per quarter seer (Rs. 20 to Rs. 40 per maund). In large towns higher rates prevail.

GANJA.

BALUCHAR FLAT.

Wholesale.

Rs. 10 or Rs. 12 per maund, besides duty at Rs. 240, and freight from Bengal.

Retail.

Six annas per tola in towns, 4 annas in rural parts (Rs. 30 and Rs. 20 per seer).

GANJA PATHAR.

GWALIOR, &C.

Wholesale.

Rs. 7 to Rs. 14 per maund, including duty and exclusive of railway freight.

KHANDWA.

Rs. 10 to Rs. 16 per maund, including dues and excluding freight.

Retail.

All sorts of Pathar.

Half an anna to one anna per tola (Rs. 100 to Rs. 200 per maund).

CHARAS.

YARKAND OR BOKHARA.

Wholesale.

Rs. 60 to Rs. 80 per maund. Inferior or damaged stuff as cheap as Rs. 40 or Rs. 30, very superior Rs. 100 and upwards.

Retail.

Generally 3 annas per tola (Rs. 15 per seer). Is sold as low as one and a half annas and in large towns at 5 annas (Rs. 25 per seer).

NEPAL SHAHJAHANI.

Wholesale.

Rs. 400 per maund (an inferior sort, Rs. 120).

Retail.

Four annas to 5 annas, 7 annas, and 8 annas per tola (Rs. 20 to Rs. 25, Rs. 35, and Rs. 40 per seer).

KUMAON.

Wholesale.

Rs. 200 to Rs. 320 per maund.

Retail.

About 2 annas per tola (Rs. 10 per seer), doubtful.

47. I would again call attention to the great disproportion between the wholesale and retail prices of ganja and charas. In bhang the scale of profit is not so high because it has to compete with the wild or illicit plant. The high prices are due to the monopoly of sale under which the contractor exacts the very highest price he can without creating illicit competition. He does not wish to extend his sales because he finds a greater profit in smaller sales and higher rates.

CONTEMPLATED CHANGES OF SYSTEM.

48. Finally I come to the proposed modifications of the present system. A suggestion has more than once been made to impose an import duty on hemp-drugs, but it did not meet the approval of the higher authorities. It is also open to the objection that the Excise Act does not authorize the imposition of an import duty. I made a representation on this subject some time ago. Since then the Excise Act has been amended by Act X of 1893. That Act, as I understand it, deals only with imports from beyond British India. The statutory power seems still wanting to control imports and impose import duty on drugs brought from other parts of British India.

If this view is correct, a further amendment of the Excise Act is required to legalize the arrangements now suggested.

49. I do not think it possible to impose either an import duty or a fixed local duty on bhang. The opportunities for evasion are altogether too extensive. For bhang we must trust, as at present, to our contract license fees. But it might be well to prohibit the import of bhang altogether. The province can supply its own wants, and there would be always some risk that ganja or charas might be surreptitiously introduced under cover of a pass for bhang. But for ganja and charas I think it both possible and desirable to impose a fixed import duty. For this purpose it will be necessary to make rules to control both local cultivation and manufacture and import. Briefly I would suggest rules to provide for the following heads:—

(1) To prohibit cultivation (as opposed to spontaneous growth) except for the manufacture of bhang or fibre and to permit it for bhang only under license from the Collector.

(2) To prohibit absolutely the cultivation or protection of the plant for the production of ganja or charas and to prohibit the manufacture of those drugs. Power might be reserved to Government to relax this rule in any special locality and permit the cultivation and manufacture under license with such duty as might be fixed.

(3) The two foregoing rules not to be applied to the hill districts where hemp is grown for fibre and charas obtained as a subsidiary product. Export of charas to the plains might be prohibited.

(4) The rules not to take cognizance of wild spontaneously grown plant. But any one desiring to collect, store, or sell the same, or to prepare any drug from it, to obtain a license from the Collector.

(5) To consolidate and improve the rules controlling the import of ganja and charas. The import of bhang might be prohibited.

(6) To impose an import duty on ganja and charas. The duty should be light at first, say from Rs. 50 to Rs. 80 per maund on pathar ganja and from Rs. 80 to 100 on charas. It could be increased by degrees. It would probably be best to collect the duty at the place of import in these provinces, and to make prepayment of the whole or part of the duty a condition precedent to the issue of the pass.

The Bengal duty on baluchar ganja is already sufficiently high; but it should be made possible to levy it in these provinces.

(7) To establish, if necessary, bonded ware-houses at a few central places where drugs could be stored duty free on import and the duty levied on removal.

(8) To continue the present system of farming the right of vend; but it should be made possible for the authorities to control the storage and issue of drugs by the contractors so as to prevent forced sales at nominal prices during the last days of an expiring contract.

It might also be found practicable and advisable to limit licenses to the sale of one or more forms of hemp-drugs to the exclusion of others.

T. STOKER,

Commissioner of Excise.

MEMO. ON NIPAL (SHAHJAHANI) CHARAS.

The ganja shrub from which charas is made grows wild in certain villages of the hills one hundred miles and more inwards. "Kala Des," "Gora Des," "Pentan" are mentioned as some of the places.

Charas is a sticky exudation from the seed pods and minute leaves surrounding the seeds. It is obtained by gently rubbing these pods and leaves between the hands. The "resin," for want of a more correct term, adheres to and is peeled off the hands, and during this process the originally colourless matter becomes black. The small leaves must not be confounded with the ordinary leaves of the plant.

I give an illustration.*

Charas is made in April and May when the seeds are ripe and the big leaves fall off.

I am sending you two samples. The larger one, made into sticks a foot long and ½ inch thick, is adulterated with the leaves and cuticle, and probably other foreign matter. The smaller sample is in the form of a cake and is the pure stuff. The first sells in Nipalganj at Rs. 3, the second at Rs. 10 a seer. The quantity exported annually from Nipaljang is said to be 50 maunds of 40 seers a maund, but this information must be received *cum grano*. It is true, however, that some years ago a very much larger quantity was imported into British territory. I do not know the cause of the decline. There is very little consumption among the Nipalese I hear. At Nipalganj an imperial export duty of Rs. 11-4 per maund and a choongee-tax of the market value of ¼ seer per maund are levied. The shrub is not cultivated. The resin is not produced by the shrub in the Tarai or plains. It is secreted only in the villages among the mountains, but at what altitude I can't say. It is called charas in the interior, but Saljehani (probably a corruption of Shahjehani) is the name given to the coarser kind in Nipalganj. The fibre is not utilized. The shrub is an annual, dying in the rains and springing up in October. Ganja is not cultivated or prepared in the Bahraich district. Ganesh Murao, a contractor in Lucknow, imports charas from Nipalganj. There is a slight exudation in the bud in the shrub found here. By bud I mean seed cuticle, flower, and adjacent leaves, but is too slight to collect. Natives say the ganja shrub has no flower, and they distinguish ganja from bhang by this difference, and the circumstance that the bhang shrub is sterile, bearing a flower, but yielding no seed. The bhang tree is consequently not reproductive, but comes from the ganja seed. Charas is known to be conveyed to Lucknow and Cawnpur. It is taken probably to other places. It is carried in skin vessels and inside bundles of bhang. The profit made by contractors should be considerable, as they sell it in British territory at double the price paid for it in Nipal. A cloth, a strong canvas, used for bags, is made from a cultivated plant in the hills called Bhangra, which natives confuse with bhang. It grows in the form of hemp, "san," in the plains, and the raw material is extracted in the same way, that is, by immersion in the water till it rots.

MEMO.—GANJA CULTIVATION IN GWALIOR STATE.

1. Gwalior Bigha = ½ an acre.—Ganja is sown in tahsíls Antri, Sipri, and Kalaras, and is a kharif crop. Antri = 250 bighas cultivated last kharif. Kolaras = 253 bighas, Ditto ditto. Sipri.—Return not received, but I think about 300 bighas.

The business is carried on chiefly by *Kachis*. Method of cultivation and of preparation of drug I will give after writing all other replies. Average outturn per bigha 7 maunds 20 seers. Ganja is sown in July. No control is exercised by the State. Custom duty, Rs. 5 per maund, is paid by the purchaser if he exports ganja to British or any other territory, and Rs. 2-8-0 if he exports to any other place in the Gwalior State. It is farmed to a cultivator who gets contract of all custom dues in the tahsíl. Usual price paid by the purchaser is Rs. 3 per maund. Ganja is a product of cultivation. It cannot be procured from the wild plants. The cultivation requires the careful extirpation of the male flowers, and the trees are very carefully seen by the cultivator every week. Even a few of the male flowers may destroy a whole field.

First of all, fields are highly manured, and in the month of July, after ploughing the fields for at least three times, ganja is sown in them like other crops. In the months of August and September *dub* and other grass found in it is taken away. In November and December the fields are ploughed once more to soften the land, and the crop is irrigated four or five times at least. In these months great care is taken that no male flowers appear in the tree. If any male flower appears, the tree is at once cut down. When the ganja is ready, it is cut down and bound in small bundles, say of about a seer each. Some cultivators also sow wheat in ganja fields in the months of October and November. Rent paid to zemindars for ganja cultivation is usually Rs. 10 to Rs. 14 per bigha.

Ujjain and Khandwa seed is always sown in Antri—Antri seed does not answer the purpose.

* Not reproduced.

Ganja, after being cut, is stored in a convenient place, and is daily crushed by the cultivators with their feet before it is made in small bundles. This is done when the ganja is green.

A certain amount of charas is obtained in this (Gwalior) State by scraping off the resin which adheres to the hands in cutting the ganja plant. In tahsíl Antri cultivators do not care much about the charas. In tahsíl Kolaras, district Narwar, I hear charas is obtained in small quantities by the same process as in Kumaun and Garhwal.

(Sd.) GOPALRAM.

NORTH-WESTERN PROVIN

Statistics relating to hemp-drugs for

Year.	Total population of the united provinces.	Cultivation of hemp plant for narcotics.						Amount of imports from other provinces in maunds and seers.				Amount of exports to other provinces in maunds and seers.				Number of licenses for wholesale vend.					Number of licenses for retail vend.				
		Area under cultivation.			*Licenses for cultivation.*																				
		Ganja.	Charas.	Bhang.	Ganja.	Charas.	Bhang.	Of Ganja.	Of Charas.	Of Bhang.	Of other preparations of the hemp plant.	Of Ganja.	Of Charas.	Of Bhang.	Of other preparations of the hemp plant.	Of Ganja.	Of Charas.	Of Bhang.	Of other preparations of the hemp plant.	Total.	Of Ganja.	Of Charas.	Of Bhang.	Of other preparations of the hemp plant.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
								M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.										
1873-74	42,002,897	...	...	...	...	...	...	118 37	119 20	1,272 0	...	6 6	2 0	80 0	...	...	...	...	...	45	...	...	...	...	...
1874-75	...	...	...	...	...	...	...	128 10	125 9	1,158 0	...	4 0	1 18	120 11	...	...	...	...	...	32	...	...	...	...	...
1875-76	...	...	...	...	...	...	...	82 0	118 16	1,590 0	...	2 0	...	32 0	...	...	...	...	...	56	...	...	...	...	...
1876-77	...	...	...	...	...	...	...	103 0	77 34	985 20	...	...	2 5	75 26	...	...	...	...	...	104	...	...	...	...	2,609
1877-78	...	...	...	...	...	...	...	132 4	87 10	1,208 0	...	22 0	3 0	180 0	...	...	...	...	...	84	...	...	...	...	2,637
1878-79	...	...	...	...	...	...	...	221 20	52 25	1,240 20	...	57 0	2 5	...	...	...	...	...	...	114	...	...	...	...	2,932
1879-80	...	...	...	195	...	...	...	784 2	146 13	1,673 0	...	238 1	12 21	293 20	...	...	...	...	...	188	...	...	...	...	2,841
1880-81	...	...	...	165	...	...	...	1,857 17	139 35	1,329 26	...	113 3	43 13	4,047 9	...	...	...	...	...	107	...	...	...	...	4,283
1881-82	44,107,869	...	...	164	...	...	...	2,401 15	319 3	1,634 20	...	103 4	10 29	5,756 38	...	...	...	...	...	147	...	...	...	...	4,300
1882-83	...	...	...	160	...	...	...	3,469 8	273 27	3,232 12	...	99 3	16 31	4,853 26	...	...	...	...	...	154	...	...	...	...	4,799
1883-84	...	...	...	81	...	...	...	3,821 6	261 7	2,910 25	...	219 26	5 34	7,687 22	...	...	...	...	...	145	...	...	...	...	4,897
1884-85	...	...	...	89	...	...	...	5,413 33	426 38	5,117 35	...	126 1	52 22	6,312 26	...	...	...	...	...	203	...	...	...	...	4,786
1885-86	...	...	...	112	...	...	...	5,253 5	809 28	3,566 32	...	44 35	51 39	8,032 3	...	...	...	...	...	206	...	...	...	...	3,757
1886-87	...	...	...	107	...	...	...	2,049 20	610 11	4,130 29	...	31 21	30 19	10,680 19	...	...	...	...	...	189	...	...	...	...	3,857
1887-88	...	...	...	178	...	...	...	2,889 33	640 32	4,656 6	...	356 3	33 23	7,995 17	...	...	...	...	...	165	...	...	...	...	3,878
1888-89	...	...	...	90	...	...	...	3,292 24	1,120 15	5,052 8	...	512 26	151 19	8,679 29	...	...	...	...	...	169	...	...	...	...	3,894
1889-90	...	...	...	160	...	...	...	4,654 3	1,338 27	5,702 0	...	278 11	218 28	7,310 3	...	...	...	...	...	151	...	...	...	...	3,929
1890-91	...	...	...	72	...	...	...	4,920 32	1,144 22	11,089,34	...	63 25	66 4	1,374 11	...	...	...	...	...	118	...	...	...	...	3,903
1891-92	46,965,085	...	...	281	...	...	...	4,239 21	1,517 26	2,183 22	...	83 35	30 7	798 33	...	...	...	...	...	129	...	...	...	...	3,872
1892-93	...	...	...	336	...	...	...	5,165 21	2,251 13	1,647 32	...	183 24	45 2	1,263 25	...	...	...	...	...	103	...	...	...	...	3,905

GENERAL REMARKS.

Column 2.—The population has been taken according to the census for the year.

Columns 3 to 5.—The figures supplied by the Director of Land Records and Agriculture have been added and explanation given as to the value of the figures.

Columns 6 to 8.—No information.

Columns 17 to 20.—No separate wholesale licenses for each kind of drugs in these provinces.

Column 21.—The printed reports show no wholesale licenses for vend of drugs. The figures entered in this statement represent the number of separate farms, each farmer holding a wholesale license. These figures have been taken from the original Settlement Reports where available.

CES AND OUDH.

the years 1873-74 to 1892-93.

Amount of license fees.					Amount of fixed duty.					Total revenue.					Quantity sold (retail).				Revenue per head of population, column 41 ÷ column 2.	Population per retail license, column 2 ÷ column 20.	Remarks.
On Ganja.	On Charas.	On Bhang.	On other preparations of the hemp plant.	Total.	On Ganja.	On Charas.	On Bhang.	On other preparations of the hemp plant.	Total.	From Ganja.	From Charas.	From Bhang.	From other preparations of the hemp plant.	Total.	Of Ganja.	Of Charas.	Of Bhang.	Of other preparations of the hemp plant.			
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
				Rs. A. P.										Rs. A. P.					Rs. A. P.		
...	...	...	...	4,07,822 13 11	...	...	...	...	...	...	...	...	...	4,07,822 13 11	...	...	...	...	0 0 2	...	
...	...	...	...	3,94,974 1 11	...	...	...	...	...	...	...	...	...	3,94,974 1 11	...	...	...	...	0 0 2	...	
...	...	...	...	4,24,002 13 2	...	...	...	...	...	...	...	...	...	4,24,002 13 2	...	...	...	...	0 0 2	...	
...	...	...	...	4,37,426 6 1	...	...	...	...	...	...	...	...	...	4,37,426 6 1	...	...	...	...	0 0 2	16,099	
...	...	...	...	3,70,993 4 7	...	...	...	...	...	...	...	...	...	3,70,993 4 7	...	...	...	...	0 0 2	15,928	The totals in columns 9 to 16 are complete only for the last three years. In case of other years the number of districts for which information is available varies from year to year.
...	...	...	...	4,33,425 13 10	...	...	...	...	...	...	...	...	...	4,33,425 13 10	...	...	...	...	0 0 2	14,325	
...	...	...	...	4,09,068 3 9	...	...	...	...	...	...	...	...	...	4,09,068 3 9	...	...	...	...	0 0 2	14,784	
...	...	...	...	4,16,298 11 2	...	...	...	...	...	...	...	...	...	4,16,298 11 2	...	...	...	...	0 0 2	9,806	
...	...	...	...	4,55,448 1 9	...	...	...	...	...	...	...	...	...	4,55,448 1 9	...	...	...	...	0 0 2	10,258	
...	...	...	...	4,97,787 6 9	...	...	...	...	...	...	...	...	...	4,97,787 6 9	...	...	...	...	0 0 2	9,191	
...	...	...	..	5,53,356 11 8	...	...	...	...	...	...	...	...	...	5,53,356 11 8	...	...	...	...	0 0 2	9,007	
...	...	...	...	5,49,279 9 3	...	...	...	...	...	...	...	...	...	5,49,279 9 3	...	...	...	...	0 0 2	9,210	
...	...	...	...	6,03,173 4 6	...	...	...	...	...	...	...	...	...	6,03,173 4 6	...	...	...	...	0 0 3	11,740	
...	...	...	...	6,70,605 8 9	...	...	...	...	...	...	...	...	...	6,70,605 8 9	...	...	...	...	0 0 3	11,436	
...	...	...	...	6,48,432 9 11	...	...	...	...	...	...	...	...	...	6,48,432 9 11	...	...	...	...	0 0 3	11,374	
...	...	...	...	7,08,504 2 1	...	...	...	...	...	...	...	...	...	7,08,504 2 1	...	...	...	...	0 0 3	11,327	
...	...	...	...	7,31,352 14 10	...	...	...	...	...	...	...	...	...	7,31,352 14 10	...	...	...	...	0 0 3	11,226	
...	...	...	...	6,92,214 10 7	...	...	...	...	...	...	...	...	...	6,92,214 10 7	...	...	...	...	0 0 3	11,301	
...	...	...	...	7,12,087 1 7	...	...	...	...	...	...	...	...	...	7,12,087 1 2	...	...	...	...	0 0 3	12,114	
...	...	...	...	7,04,788 0 0	...	...	...	...	...	...	...	...	...	7,04,788 0 0	...	...	...	...	0 0 3	12,012	

GENERAL REMARKS.

Columns 22 to 25.—No separate licenses for each kind of drugs.

Columns 27 to 31.—See remarks against columns 22 to 25.

Columns 32 to 36.—No fixed duty levied in these provinces.

Columns 37 to 41.—See remarks against columns 22 to 25.

Columns 42 to 45.—No information available.

Column 46.—In calculating the revenue per head of population sums exceeding half pies have been taken as one pie, and half pies and smaller sums have been omitted, except where the revenue per head only amounts to a fraction of a pie in which case fractions of a pie have been shown.

PUNJAB MEMORANDUM.

The system of excise administration in respect of intoxicating (hemp) drugs in the Punjab has been receiving a great deal of attention during the last five or six years; and it so happens that, as the outcome of much inquiry and discussion, we are now on the eve of the introduction of a new set of rules which will alter and improve that system in many respects. It will, I think, be convenient if I explain how matters stand at present. The correspondence on the subject is voluminous, and there is certainly no dearth of information.

General facts with regard to hemp drugs in the Punjab.

2. The broad facts with regard to these drugs in the Punjab may first be stated. Charas is imported across the northern and western frontiers (mostly from Yarkand) to the extent of about 4,000 maunds (the import actually rose to close on 5,000 maunds last year) annually. Of this quantity between one-fourth and one-fifth is retained for consumption in Punjab districts, the remainder passing on, principally to the North-Western Provinces and Oudh, the Native States under the political control of the Punjab Government and the Rajputana States. The quantity of the other forms of the prepared drug coming into the province is trifling and may be neglected. The supply of bhang is derived from the wild hemp plant which grows within the province in the sub-montane tracts under the Himalayas and the Suleiman range. The annual consumption of bhang (which is merely the leaves of the wild plant) falls little short of 4,000 maunds in the districts of the Punjab. The import into and the transport through the Punjab of charas, and the transport of bhang from the districts of growth to those of consumption are regulated by a system of passes; but no direct duty or tax of any sort is levied. With the exception of a few plots, grown by fakirs principally for their own consumption in one or two of the western districts, there is no cultivation of the plant for the production of intoxicants. The total area of these plots does not, I believe, exceed 100 acres; and the produce is taken in the form of bhang. There is, so far as I am aware, absolutely no manufacture within the province of hemp drugs from the plant.* The only taxation now levied is in the form of fees for the monopoly of vend. "The excise income from intoxicating drugs in the Punjab is derived from the farm of the monopoly of sale within tahsils or other subdivisions of districts" (Rule 1). The total amount of this income is between $1\frac{1}{2}$ and $1\frac{3}{4}$ lakhs per annum.

*Note.—This does not of course apply to the manufacture of majum, &c., by the licensed vendors.
T. G. W.

Punjab Government Proceedings (Revenue and Agriculture) for January 1889, Nos. 1—5.

3. With this explanation I would invite attention to the (printed) collection of papers in Punjab Government Proceedings, Revenue and Agriculture (Revenue), for January 1889, Nos. 1—5. That correspondence arose out of a reference from the Government of India in connection with a draft article in Dr. Watt's Dictionary of Economic Products; but the local Government requested the Financial Commissioner to consider "the question of the feasibility of putting an import duty on charas." A reference to local officers produced the papers which will be found in the above quoted Proceedings, and it will be seen that they contain a great deal of information on the subject. The Punjab Government summed up the results in their letter No. 1, dated 3rd January 1889 (No. 4 in the Proceedings). From this I make the following extract (paragraph 4): "In the Lieutenant-Governor's opinion, however, the whole subject is still rather obscure, and is one which should be carefully studied by the new Commissioner of Excise. The Commissioner should therefore be requested to find out exactly what the system of other local Governments is, and from what other places ganja and charas come to the Punjab besides Leh, and in what quantities. * * * * * * The Commissioner of Excise should also study the subject and the system and facts as regards bhang carefully, and report on the whole question after the end of a year."

Report and proposals made in 1890.—Punjab Government Proceedings (Revenue and Agriculture) for January 1892 (Nos. 13—16).

4. I would next refer to the collection of papers in Punjab Government Proceedings, Revenue and Agriculture (Revenue), for January 1892, Nos. 13—16, regarding "taxation of charas and bhang." In accordance with the orders contained in the passage quoted at the close of the preceding paragraph I took up the question early in 1890. My report will be found as No. 14 of the above Proceedings (my letter No. 76, dated 10th April 1890). I would invite a perusal of that report and more particularly of paragraphs 8—11, 14, 15, and 18. The proposals which I made are summarized in paragraph 29, and I submitted a set of draft rules with explanatory remarks. These proposals were referred for opinion to selected officers. During my absence on furlough (April 1890 to December 1891) the replies of the officers consulted were received and my *locum tenens*, Mr. R. M. Dane, considered the proposals in detail (his letter No. 240, dated 24th December 1890, which will be found in the Proceedings last quoted). The proposals involved *inter alia* the imposition of a direct import duty at the frontier on all foreign (hemp) drugs;

and, on a reference to the Government Advocate, it was pointed out by him that there was no power under the Excise Act to impose such a duty. The orders of the local Government on the proposals are contained in Punjab Government letter No. 8, dated 11th January 1892 (No. 16 of the Proceedings). The Lieutenant-Governor "was of opinion that a tax of Rs. 20 per maund might be imposed upon charas with effect from 1st April 1893. No doubt the retail price of charas will be somewhat raised; but this in itself is an advantage, as the use of the drug is certainly pernicious." Accepting the opinion of the Government Advocate as to the manner in which the tax should be imposed, the letter describes the system to be adopted—the establishment of golahs to which all charas should be taken on entering the Province and which it should be allowed to leave only under a license or pass for which a fee should be levied at the rate of 8 annas a seer. With regard to bhang, "the Lieutenant-Governor was not thoroughly satisfied with the proposals made by the Excise Commissioner, and he would prefer to reconsider the question hereafter when the tax upon charas has been actually introduced."

Rules drafted in 1892 and 1893.

5. In accordance with these orders I drafted a set of rules giving effect to them. The draft was circulated to Commissioners and selected District Officers; and on receipt of their opinions the case was submitted to the Financial Commissioner in October 1892 for orders with regard to several points that had arisen in connection with the draft. In April 1893 Government passed orders calling for a copy of the rules in complete form, and pointing out that a tax on charas only and not on intoxicating drugs [section 3 (*h*), Act XXII of 1881] had been agreed to. Some further correspondence passed, and last month (August 1893) I submitted to the Financial Commissioner a final draft of the rules. In the meantime the Government of India had taken up the question of amending the Excise Act so as to make the imposition of an import duty on intoxicating drugs legal. With the passing of Act X of 1893 the necessity for the system of golahs and passes accepted by the Punjab Government in their letter No. 8, dated 11th January 1892, ceased. It will now be possible to revert to my original proposals of 1890, at least so far as they provide for a direct import duty on charas.

Present state of the proposals for taxation.

6. It is probably unnecessary for the Commission to refer to the correspondence dealt with in the preceding paragraph because it relates to a condition of things which has ceased to exist and represents so much labour lost. The present state of affairs may be described as follows:—(*i*) an import duty at the rate of Rs. 20 per maund will probably be imposed with effect from 1st April 1894 on all charas entering the province; (*ii*) rules providing for this duty and also putting the system of licensing vend on a satisfactory footing will be submitted shortly to the Government of India; (*iii*) with regard to bhang, His Honor the Lieutenant-Governor has recently referred to this question in reviewing the Excise Report for 1892-93 (paragraph 6 of the Review). I quote the paragraph in full because it mentions the subject of an import duty on charas also: "The question of levying an import duty on charas was referred to in the 10th paragraph of the Review of the Report for 1891-92. There were legal difficulties in the way of imposing this tax under Act XXII of 1881, but these will be removed when the amending Bill now before the Legislative Council has been passed, and draft rules will shortly be submitted to the Government of India. The question of the taxation of bhang is a far more difficult one, but it must before long be taken in hand. It must, however, be borne in mind that, as remarked in the 10th paragraph of last year's Review, 'in regard to matters of this sort, which involve an interference with ancient and firmly-rooted habits of large masses of the people, it is desirable to proceed cautiously, doing one thing at a time.'" I will now proceed to give such detailed information as is available with regard to the supply of these drugs, and will then describe the system under which their supply and vend are controlled.

Trade returns of the import of charas, &c.

7. Dealing first with the import of the drugs, I take the following figures from the Provincial Reports of External Trade. The figures give the amount imported in maunds:—

Year.	Charas imported from			Ganja.	Bhang from		Other kinds.	
	Ladakh.	Kashmir.	Kabul.		Kabul.	Kashmir.	Ladakh.	Kashmir.
1887-88	2,822	711	42	No import.	...	25	...	4
1888-89	2,629	717	96		13	10	...	...
1889-90	1,625	250	38		27	...	47	...
1890-91	2,560	669	...		5	485	6	...
1891-92	2,863	431	...		25	...	3	...

These figures do not agree very closely with those given in our Excise Returns, which I will examine presently; but I give them because they are in a way from an independent source. It will be seen that there is actually no import of ganja shown, while the quantity of "other kinds" is exceedingly small. With regard to the large quantity of bhang shown as imported from Kashmir in 1890-91 this may be treated as if it were produced in our own districts (*e.g.*, Gurdaspur). The wild plant grows in the sub-montane parts of Jummoo and comes into our districts just as it does from other areas of supply within the Punjab. It will thus be evident that except charas the import of these drugs from beyond our northern and western frontiers is of very limited quantity.

As regards charas, what is shown as coming from Kashmir is from the same source (Yarkand) as that shown from Ladakh. Most of the Yarkand charas takes the ordinary route through Leh to Sultanpur (Kulu); but a certain quantity of it passes westward through Kashmir territory. This was pointed out by Captain Ramsay, Joint-Commissioner, Leh, in his letter which will be found at page 7 of the printed Proceedings quoted at the commencement of paragraph 3. In paragraph 5 Captain Ramsay says "charas will grow, though not well, in Kashmir; but as a matter of fact it is not grown in Kashmir, and in Ladakh it of course could not be grown. The charas shown under the two heads Kashmir and Ladakh consists of Yarkand charas imported (1) *viâ* Ladakh and Kashmir to the Punjab, (2) *viâ* Ladakh direct to the Punjab through Kulu." These trade returns are obviously defective in some respects. They show no drug as coming across the western frontier (from Sewestan) or the north-western (from Bajaur), except that from Kabul, while there is undoubtedly a certain amount of import trade into the Derajat and Hazara. This probably appears under other heads in the trade returns. But the figures given are useful as showing that there is a very large import of charas from Yarkand, and that the import of this drug from other quarters and of other drugs from all sources is unimportant in comparison with this.

8. The following figures of imports and consumption of charas are taken from the Excise Returns:—

Excise figures of import and consumption of charas.

Year.	Imports.	Consumption in the Punjab.
	Mds.	Mds.
1887-88	4,516	868
1888-89	4,968	890
1889-90	3,332	943
1890-91	4,209	814
1891-92	6,554	1,026
1892-93	...	1,020

The figures of imports given above are the totals of the district details, and the same consignments have undoubtedly been shown in many cases twice over. No systematic attempt has been made to obtain correct statistics of the quantity brought across the frontier; and it is one of the incidental advantages which we expect to derive from the proposed new arrangements that we shall be able to register the import trade efficiently and acquire a proper control over it. There has been a great development of the trade in charas during the last three years. The quantity coming into Hoshiarpur by the Kulu route rose from 2,201 maunds in 1890-91 to 3,242 maunds in 1891-92 and to 3,932 maunds in 1892-93. In the last of these years the Kangra district returns give the quantity as 3,765 maunds. These figures are taken from the register of excise passes, and may be relied on as fairly accurate. Allowing for what went by the Kashmir and other routes, it seems probable that the imports in 1892-93 (which was an exceptional year) fell little short of 5,000 maunds. In an ordinary year they have averaged between 3,000 and 4,000 maunds, the trade being subject to great fluctuations. The figures of consumption given above show the quantity retailed by the licensees and are fairly accurate. The licensees are required to keep accounts and furnish returns of their dealings.

9. The quantity of bhang shown as sold by retail vendors in each of the last six years is—

Details of the consumption of bhang.

	Mds.
1887-88	3,906
1888-89	3,709
1889-90	4,238
1890-91	3,428
1891-92	3,977
1892-93	3,640

There is a certain quantity consumed without passing through the hands of licensed vendors; but this is probably not very great, because the people of the parts in which the plant grows wild are not addicted to its use, while the retail price (three or four annas a seer) is so small that it is not worth while for a consumer to attempt to obtain a supply elsewhere than from the nearest licensed shop.

10. The wholesale price of charas varies very much in different localities and from year to year, according to the state of the market. The price at Kulu is said to have been Re. 1-4 a seer in 1892-93 as compared with Rs. 3 to Rs. 4 in the preceding year, the prices at Hoshiarpur for the same periods being reported as Re. 1 and Rs. 2 respectively. As already remarked, last year was an exceptional one, and the price of the drug on entering the province varies usually from Rs. 2 to Rs. 4 a seer, increasing at other places with the cost of carriage. The retail price varies from Rs. 7 to Rs. 10 a seer. The cost of bhang to the licensed vendor is only that of collecting on the spot and conveying to the place of sale. It is usually sold retail at the rate of four annas a seer.

Price of hemp drugs.

11. The rules with reference to the import, transport, and sale of intoxicating hemp-drugs will be found at page 107 of the Punjab Excise Pamphlet. They were framed under Act X of 1871, and are inconvenient in form, besides containing much that is now obsolete. It is sufficient to say that the import into the province of charas and its subsequent transport, and the transport of bhang from the districts of growth to those of consumption, are regulated by a system of passes, no duty or fee of any sort being charged. Importers of charas must take their consignments to the Deputy Commissioner of the frontier district which they enter and obtain from him a pass covering subsequent transport, the packages containing each consignment being closed and sealed. Provision is made for attesting sales *en route*, changes of destination, and the like. For the transport of bhang by a licensed vendor a permit from the district of destination and a pass issued on this from the district of production are required. The whole system is rather loose, and the new rules will, it is hoped, give us a much more strict control over the movements of consignments of the drugs.

Regulation of import and transport.

12. The existing arrangements in regard to taxation and vend are explained in Rule 1: "The excise income from intoxicating drugs in the Punjab is derived from the farm of the monopoly of sale within tahsils or other sub-divisions of districts. In some districts the monopoly of opium and other drugs prepared from the poppy is farmed separately from that of other intoxicating drugs, while in others the same farm includes both." Ordinarily the farm or license is held for the year, the fee payable being determined by auction. The present rules make no provision for the issue of wholesale licenses (section 13, Act XXII of 1881); but licenses have actually been given in the Amritsar district, although there is no authority for this. The new rules, I may say, will provide for such licenses. As to retail vend, the practice is not quite in keeping with the rules. The hemp-drugs are in fact usually offered for sale at the same shops as opium, though their sale is covered by a separate license. The opium licenses are disposed of by shops, singly, or by groups of shops (by tahsils or smaller areas); and the hemp-drugs licenses go with them as a rule. The combined licenses (except in four districts) are held by the year, the fee payable for each shop or group of shops being determined by annual auction. As a matter of account the fees paid in each district in respect of the combined opium and hemp-drug licenses, where these are held together, are distributed between the two heads of receipt in a proportion which is supposed to represent the actual value of each set of licenses. This proportion varies from district to district. As a result of the practice described above, the number and locality of the shops are fixed beforehand from year to year (they are as a matter of fact seldom altered). In four districts the combined monopoly of the vend of opium and of hemp-drugs at the authorized shops (of which the number and localities are fixed) have been leased for a term of years (three to five). I may add that in the new rules it is proposed expressly to provide for a system of licensing under which the number of shops and the locality of each shall be fixed, *i.e.*, each shop will be separately licensed, although the licenses may be disposed of either singly or in groups.

Licensing of retail vend.

Statistics of consumption.

13. As regards the consumption of charas, the following details may be given. The quantity (in maunds) retailed in each of the past two years was :—

Division.	1891-92.	1892-93.
Delhi	323	329
Jullundur	349	341
Lahore	189	189
Rawalpindi	79	80
Peshawar	60	59
Darajat	26	22
Total ...	1,026	1,020

It will be seen from these figures that the consumption of this form of drug is heaviest in the Delhi and Jullundur Divisions, while in the Rawalpindi and frontier Divisions it is comparatively small. I am not prepared to give any explanation of these facts. Within Divisions the consumption is distributed on the whole very evenly. For further details I would refer to Provincial Excise Statement C published with the Annual Excise Administration Reports.

For bhang the following details (consumption in maunds) may be given :—

District.	1891-92.	1892-93.
Dera Ghazi Khan	603	399
Mooltan	463	428
Ferozepore	268	252
Ludhiana	248	271
Lahore	250	248
Amritsar	194	281
Gurgaon	249	178
Delhi	225	177
Jullundur	167	160
Hoshiarpur	151	189
Umballa	114	136
Jhang	137	100
Gujranwala	130	89
Muzaffargarh	135	150
Dera Ismail Khan	126	96

In none of the remaining districts did the consumption exceed 100 maunds. With regard to these figures of the consumption of bhang one very important fact is established. The Muhammadan population of the south-western districts (Mooltan, Muzaffargarh, and Dera Ghazi Khan), who are prohibited by their religion from the use of spirits, are to a very large extent addicted to drinking an infusion of bhang as an intoxicant. It will be observed that the consumption in the two districts of Mooltan and Dera Ghazi Khan is between one-fourth and one-fifth of that of the whole province. In these districts bhang is undoubtedly a substitute with the Muhammadan population for the spirits which their creed forbids them to take.

Another fact that may be noted is that the districts of Ferozepore, Ludhiana, Lahore, and Amritsar, which come after Mooltan and Dera Ghazi Khan in this matter of consumption of

bhang, are those in which the Sikh element is strongest. The Sikh population of the province being 1,389,934, these four districts contribute 781,439 towards this total. It seems likely that the prohibition amongst the Sikhs of tobacco-smoking has a good deal to do with their preference for the drug in a liquid state.

This question of the distribution of consumption according to locality, religion, caste, &c., is one that will, no doubt, receive a great deal of attention from the Commission, and it seems unnecessary in this memorandum to do more than indicate the general features. Annexed to the memorandum will be found two maps showing the consumption of charas and of bhang separately by districts in the year 1890-91, and these will serve to illustrate the above remarks. It will be seen that, roughly speaking, as regards the use of charas the province divides itself into two parts—the eastern districts, in which the consumption exceeds 5 oz. per 100 of the population, and the western districts, in which the average consumption is less than this. As regards bhang, on the other hand, the districts fall into 3 groups:—(1) the south-western districts, in which the consumption exceeds 40 oz. per 100 of population; (2) the central districts, in which it averages between 20 and 40 oz.; and (3) the northern and eastern districts, in which it is less than 20 oz.

14. I will now take the special points mentioned in the note annexed to the Secretary, Indian Hemp Drugs Commission's letter in detail.

Points enumerated in Secretary to Commission's letter.

(*a*) The system in the Punjab is uniform. The arrangements are under the control in due gradation of (1) the Financial Commissioner, (2) Divisional Commissioners and the Commissioner of Excise, and (3) Deputy Commissioners, the actual administration in each district being in the hands of the Deputy Commissioners. The Act is the Excise Act (XXII) of 1881, and the rules are those which will be found at page 107 of the Punjab Excise Pamphlet.

(*b*) It is not possible to give any estimate of the extent to which the wild hemp plant grows. It is a mere weed, and cannot be said to *cover* any particular area, as it is scattered about. So much is taken in the form of bhang as is required for the consumption in our districts (4,000 maunds of dried leaves) and in the Punjab Native States, and the remainder is probably allowed to die down. The dry stalks are sometimes, I believe, used for fuel. No preparation of any sort is extracted from the plant. The manner in which the transport and sale of bhang are controlled has been already described. With regard to possession, section 22 of the Excise Act prevents any one other than a dealer from having in his possession more than ¼ of a seer; but, so far as I am aware, there is now nothing to prevent a person within this limit from collecting and using the leaves of the plant. He could not sell bhang. The Commission might usefully refer to Financial Commissioner's Circular No. 3, dated January 1882, in which the system is explained.

(*c*) With reference to the above, it will be evident that the necessity for cultivating the hemp plant for the production of bhang as a marketable commodity scarcely arises. A few patches of the plant are grown in the Mooltan, Dera Ghazi Khan, Dera Ismail Khan, Shahpur, and Bannu districts, but the total area is probably less than 100 acres. There is no restriction on or regulation of cultivation; and, so far as I can see, there is nothing to prevent a person who grows the crop from using the produce as an intoxicant, provided he is not at any time in possession of more than the quantity allowed by the Act. Where the plant is grown the object is to provide for private consumption. Manufacture of any of the "preparations" is unknown in the Punjab. I may add that I proposed in 1890 either to prohibit the cultivation entirely or to impose an acreage duty that would be prohibitive. No notice has been taken by higher authority of the proposal. It will be easy at the present time to deal with the cultivation and to stamp it out, while there is the danger that, if we adopt measures which will restrict the supply and enhance the price of bhang, the result of these measures may be to encourage the cultivation. It has been suggested that steps should be taken to make persons on whose waste land the wild plant grows responsible for its destruction; but, as already explained, the local Government has not yet agreed to alter the existing arrangements in respect of bhang in any way, and the consideration of the proposal would, therefore, be premature (*see* Commissioner of Excise, Bengal's Circular No. 6075, dated 26th January 1893).

(*d*) Charas is imported by (1) Yarkandis, Ladakhis, and others who bring it in, dispose of it, principally at Hoshiarpur and Amritsar, and return with piece-goods, &c., and (2) merchants of Amritsar and other places who have established trade relations with Ladakh. I would refer the Commission for further particulars (if they are wanted) to paragraph 40 of the Report on the External Land Trade of the Punjab for the year 1891-92. The traders are not licensed. The only control over the trade is in the way of requiring a pass from the Deputy Commissioner of the frontier station where a consignment enters the Punjab, and the subsequent transport is regulated. Rule 7 is as follows: "Merchants bringing charas into the

Punjab must obtain a pass (Appendix III) from the Deputy Commissioner of the frontier station where they enter the Punjab, and take it for countersignature to the Deputy Commissioner or Collector of every district in the Punjab or the North-Western Provinces, which they may subsequently enter with the charas. The article, its quantity (both gross weight of the package and net weight of the charas being given), and destination are stated in the pass, and the package is sealed up with the official seal of the Deputy Commissioner. It may be opened at any head-quarters station or tahsil while on the way to its destination, and a portion of its contents may be sold to the farmer of excise for drugs, the fact being recorded on the pass, and the package resealed. The owners must be warned that, if the package is found open and any charas is sold from it, except as above stated, they will be proceeded against under the Excise Laws, and the package will be liable to confiscation."

Where a consignment is conveyed by rail, the provision requiring it to be taken to the Deputy Commissioner, &c., of every district through which it passes is dispensed with. Rules 8—13 may also, if necessary, be referred to.

(*e*) There is no provision in the existing rules for licensing wholesale vend (section 13 of the Act); but this defect will be supplied in the new rules. The arrangements with regard to retail vend have been already described (paragraph 12 of this memorandum).

(*f*) As above explained, there is no direct tax on any of the drugs. Indirect taxation is taken in the form of license fees for retail vend in the manner already described.

(*g*) The system of licensing retail vend has been described in the preceding paras., and it has been explained (paragraph 12) that the practice in the matter is not strictly in accordance with the rules. The rules provide only "for the farm of the monopoly of sale" within certain areas, the monopoly being either combined with or separate from that of opium. The rules make no provision for fixing the number and sites of the retail shops; but to the form of lease (Appendix I) is added a schedule "showing the names of places at which licensed shops for the retail vend of intoxicating drugs have been authorized," and the practice has always been to fix the number and locality of the shops. The arrangements, it should be understood, in respect of licensing the sale of these drugs mostly depend on those for the retail vend of opium. In one or two districts the experiment is being tried of licensing a few shops for the sale of opium only; but with this exception opium and hemp-drugs are almost invariably offered for sale at the same shops, the licenses being in the hands of the same persons. For this reason the number and locality of the shops are really fixed under the Opium Rules. The number of shops is determined in a general way with reference to area and population, though there is no accepted standard. The number depends in a great measure on the habits of the people in respect of the consumption of opium and hemp-drugs. In the statement appended to this memorandum are given details of the average population in 1892-93 to each license for the sale of opium and of hemp-drugs; but in considering these figures it should be remembered that, as explained above, there is as a rule only one shop for every two licenses; or, to put the matter in another way, hemp-drugs are usually retailed at the opium shops. There is nothing in the nature of "local option." In practice the shop sites remain as they have been established for a long time, and the necessity for a change in the way of adding new shops or closing existing ones seldom arises.

The license fee to be paid for each shop or each group of shops is determined (except in the four districts where the fees have been farmed for a period of years) by annual auction. No upset price is fixed.

(*h*) No rate is fixed at which the drugs must be supplied by wholesale to retail vendors. The wholesale price of charas depends on the state of the market, and bhang cannot be said to have any wholesale price as the cost to the vendor is only that of collecting and carriage. The average retail price charged to the consumers is from Rs. 7 to Rs. 10 per seer (according to the state of the market and the wholesale price) for charas and four annas a seer for bhang. Both are sold in very small quantities to consumers, and the price charged, if worked out on the seer, varies a great deal from district to district within limits of (roughly) Rs. 4 to Rs. 15 for charas and 2 annas to 8 annas for bhang.

(*i*) The maximum quantity fixed for retail sale to or possession by consumers is that laid down in section 22 of the Excise Act [Section 3 (K)], bhang one-quarter of a seer; charas, &c., five tolahs. With regard to sale this is provided for by a condition in the form of license. No minimum price is fixed.

(*j*) Cases occasionally come to light of illicit sale of charas, &c., or of possession of more than the authorized quantity; but they are rare and unimportant. Illicit

practices of other kinds are, I believe, unknown. It will, I think, be clear from this memorandum that there is really no room for such practices. No special measures of prevention have been found necessary.

(*k*) The modifications of the present system, which are under consideration, have been described in the early part of this memorandum.

(*l*) The sources of supply, the extent of cultivation and trade, as well as the other heads mentioned here, have been examined in the memorandum.

T. G. WALKER,

Commissioner of Excise, Punjab.

Statistics relating to Hemp Drugs in the Punjab.

Year.	Total population.	Cultivation of hemp plant for narcotics. Area under cultivation. Ganja.	Charas.	Bhang.	Licenses for cultivation. Ganja.	Charas.	Bhang.	Amount of imports from other provinces in maunds and seers. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Amount of exports to other provinces in maunds and seers. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Number of licenses for wholesale vend. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	Number of licenses for retail vend. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
									Mds. Srs.				Mds. Srs.												
1873-74	17,004,500	...	...	...	...	...	...	...	2,187 0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1874-75	17,004,500	...	...	...	...	...	...	...	1,093 0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1875-76	17,004,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1876-77	17,004,500	...	...	...	...	...	...	...	4,337 0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1877-78	17,004,500	...	...	...	...	...	...	...	5,113 0	...	...	2,250 27	...	...	...	...	...	...	...	...	...	...	...	...	...
1878-79	17,004,500	...	...	...	...	...	...	...	4,624 0	...	...	4,060 5	...	...	...	...	...	...	...	...	...	...	...	...	...
1879-80	17,004,500	...	...	...	...	...	...	...	4,457 0	...	...	3,145 36	...	...	...	...	...	...	...	...	...	...	...	...	...
1880-81	17,004,500	...	...	...	...	...	...	...	2,728 0	...	...	2,034 27	...	...	...	...	...	...	...	...	...	...	...	...	...
1881-82	17,004,500	...	...	...	...	...	...	...	3,115 20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1882-83	18,842,264	...	...	...	...	...	...	...	2,079 24	...	...	2,053 32	...	...	...	...	...	...	...	...	...	...	...	...	...
1883-84	18,842,264	...	...	...	...	...	...	...	3,426 3	...	...	2,545 30	...	...	...	...	...	...	...	...	...	...	...	...	...
1884-85	18,842,264	...	...	...	...	...	...	...	3,910 24	...	...	2,913 14	...	...	...	...	...	...	...	...	...	...	...	...	...
1885-86	18,842,264	...	...	...	...	...	...	...	3,907 13	...	...	2,315 26	...	...	...	...	...	...	...	...	...	...	...	...	...
1886-87	18,842,264	...	...	...	...	...	...	...	3,077 15	...	...	3,306 6	...	...	...	...	...	...	...	...	...	...	...	...	...
1887-88	18,842,264	...	...	...	...	...	...	...	3,781 16	...	...	2,414 20	...	...	...	...	...	...	...	...	...	...	...	...	...
1888-89	18,842,264	...	...	...	...	...	...	...	4,315 29	...	...	2,982 23	...	...	...	...	...	...	...	...	...	...	...	...	...
1889-90	18,842,264	...	...	...	...	...	...	...	4,098 0	...	...	2,847 9	...	...	...	...	...	...	...	...	...	...	...	...	...
1890-91	18,842,264	...	...	...	...	...	...	...	4,077 1	...	...	3,305 9	...	...	...	...	...	...	...	...	...	...	...	...	...
1891-92	18,842,264	...	...	...	...	...	...	...	3,332 24	...	...	2,286 9	...	...	...	...	...	...	...	...	...	...	...	...	...
1892-93	20,860,913	...	...	...	...	...	...	...	4,399 19	...	...	3,304 34	...	...	...	...	...	...	...	...	...	...	...	...	...
		...	...	...	...	...	...	...	6,534 6	...	...	5,337 24	...	...	...	...	...	...	...	...	...	...	...	...	...
		...	...	...	...	...	...	...	11,462 17	...	...	10,402 11	...	...	...	...	...	...	...	...	...	...	...	...	...

Columns 3—8.—There is no cultivation of the plant for narcotics.

Columns 9—16.—Only details with regard to the import and export of charas are available in the Excise Returns. Please see paragraph 7 of the memorandum. What import there is (and it is of trifling amount) of other forms of the manufactured drug has been included under charas. For the year 1892-93 what is shown under the head of imports (column 10) are the quantities coming into *each district*, whether brought from beyond the frontier or from one of our own districts, and the same remark applies to the entries of exports (14). The Excise Statistics of that year were prepared in this manner, so as to give us reliable figures of the quantity retained in each district for consumption.

JAB.

for the years 1873-74 to 1892-93.

Amount of license fees. On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	Total.	Amount of fixed duty. On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	Total.	Total revenue. From ganja.	From charas.	From bhang.	From other preparations of the hemp plant.	Total.	Quantity sold (retail). Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Revenue per head of population, column 44 ÷ column 2.	Population per retail license, column 2 ÷ column 26.	Remarks.
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
				Rs.										Rs.		Mds. Srs.	Mds. Srs.	Mds. Srs.	Rs. A. P.		
... ...	...	...	...	1,43,921	...	...	...	...	...	...	...	...	...	1,43,921	...		*		0 0 1·6	24,470	* Statistics of consumption not available for these years.
... ...	...	...	...	1,46,232	...	...	...	...	...	...	...	...	...	1,46,232	...		*		0 0 1·6	23,037	
... ...	...	...	...	1,36,232	...	...	...	...	...	...	...	...	...	1,36,232	...	1,886 13	5,113 6	337 37	0 0 1·6	18,434	
... ...	...	...	...	1,43,937	...	...	...	...	...	...	...	...	...	1,43,937	...	1,012 35	5,009 30	202 18	0 0 1·6	18,473	
... ...	...	...	...	1,48,477	...	...	...	...	...	...	...	...	...	1,48,477	...	1,479 6	5,204 20	155 5	0 0 1·6	18,971	
... ...	...	...	...	1,39,312	...	...	...	...	...	...	...	...	...	1,39,312	...	1,822 3	3,324 30	190 17	0 0 1·3	19,073	
... ...	...	...	...	1,39,577	...	...	...	...	...	...	...	...	...	1,39,577	...		5,123 maunds.†		0 0 1·3	17,554	† Includes charas, bhang, and other preparations, separate details not being available.
... ...	...	...	...	1,31,574	...	...	...	...	...	...	...	...	...	1,31,574	...	479 27	3,000 36	88 24	0 0 1·5	18,629	
... ...	...	...	...	1,37,503	...	...	...	...	...	...	...	...	...	1,37,503	...	432 34	3,560 32	85 31	0 0 1·2	19,086	
... ...	...	...	...	1,39,497	...	...	...	...	...	...	...	...	...	1,39,497	...	510 29	3,439 33	63 7	0 0 1·4	19,040	
... ...	...	...	...	1,44,640	...	...	...	...	...	...	...	...	...	1,44,640	...	554 30	3,900 17	33 35	0 0 2·0	19,221	
... ...	...	...	...	1,46,608	...	...	...	...	...	...	...	...	...	1,46,608	...	601 7	3,631 32	44 23	0 0 1·5	19,149	
... ...	...	...	...	1,48,620	...	...	...	...	...	...	...	...	...	1,48,620	...	662 35	3,687 22	67 30	0 0 1·6	19,097	
... ...	...	...	...	1,53,771	...	...	...	...	...	...	...	...	...	1,53,771	...	798 35	3,565 7	33 25	0 0 1·3	17,631	
... ...	...	...	...	1,47,505	...	...	...	...	...	...	...	...	...	1,47,505	...	808 30	3,783 26	28 18	0 0 1·2	16,588	
... ...	...	...	...	1,47,048	...	...	...	...	...	...	...	...	...	1,47,048	...	880 30	3,709 0	25 24	0 0 1·2	16,726	
... ...	...	...	...	1,54,885	...	...	...	...	...	...	...	...	...	1,54,885	...	943 15	4,230 12	30 4	0 0 1·3	16,330	
... ...	...	...	...	1,55,097	...	...	...	...	...	...	...	...	...	1,55,097	...	814 25	3,420 21	21 36	0 0 1·2	16,317	
... ...	...	...	...	1,57,397	...	...	...	...	...	...	...	...	...	1,57,397	...	1,026 22	3,976 29	33 4	0 0 1·4	12,290	
... ...	...	...	...	1,70,954	...	...	...	...	...	...	...	...	...	1,70,954	...	1,029 6	3,849 1	25 12	0 0 1·2	12,609	

Columns 17—21.—There is no provision for the issue of wholesale licenses (paragraph 12 of the memorandum).

Columns 22—31.—There is no separate licensing of the retail sale of different forms of the drugs. The licenses cover the vend of all sorts.

Columns 32—36.—There is no fixed duty.

Columns 37—41.—The only revenue is that derived from retail licenses which cover the vend of all kinds of hemp-drugs.

Extract paragraph 40 from the Report on the External Land Trade of the Punjab for the year 1891-92.

Kulu and Ladakh.

40. The main portion of the Ladakh trade finds its way into India through Kulu. The Assistant Commissioner in his report makes some interesting observations, pointing out that while the Kulu posts register as Ladakh trade much that is really trade with Thibet and other places, they also fail to include a large portion of genuine Ladakh trade which enters British territory *viâ* Kashmir. He remarks:—

"In the Provincial Foreign Trade Report the returns furnished by the Kulu registration post constitute what is known as the 'Ladakh' trade. This general term, however, requires explanation. In so far as Leh is the chief emporium of this trade, it may be convenient to describe as imports and exports of Ladakh all merchandise of Yarkand which is exchanged here for goods from India; but, on the one hand, it is to be remembered that at the Sultanpur post all merchandise is registered which crosses the Rohtang pass, so that imports and exports of Thibet, Baltistan, and the British districts of Lahul and Spiti are included in the 'Ladakh' trade, while, on the other hand, all exports from and imports to Leh which take the Kashmir route are treated in the Provincial Report as trade with Kashmir and not with Ladakh."

He makes some further remarks regarding the agency by which this trade is conducted:—

"The trade with Ladakh is in the hands of four classes:—(1) The *merchants* of Hoshiarpur, Amritsar, and Sultanpur.—Many of the latter are Lahulis, who deal chiefly in wool. The Indian merchants send up piece-goods or tea in the spring and bring down Yarkand and Ladakh produce, chiefly charas, in the autumn. They use mules for carriage. Latterly the more wealthy muleteers have commenced to trade on their own account. (2) The *Yarkandis*.—These men generally dispose of their goods at Leh, but some of them come on to India with charas, carpets, and numdahs. Many also, after selling their goods at Leh, bring on for sale in India the horses upon which these goods were laden. Having disposed of their means of carriage, they generally return empty-handed. (3) The *Baltis* of Baltistan, who visit Simla in the cold weather in search of employment as road coolies and the like.—They are often erroneously called Ladakhis. They do not visit India for the sake of trade, but they take the opportunity of bringing with them dried apricots, which accounts for the entry 'fruits' under the head of imports, returning to their own country with as much as they can carry of brass, copper, and iron vessels. Some of them also carry back with them China cups and saucers, which are in demand in a tea-drinking country. (4) *Bhotis*, which term includes the Mongolian races inhabiting Ladakh, Zanskar, Chinese Thibet, and Lahul.—The wool and pashm imported by the Bhotis are laden chiefly on the backs of sheep and goats. These sheep and goats figure in the returns of imports. On being discharged of their burdens at Sultanpur they are sold to butchers from Simla. Beyond the various food-grains which are in demand in their desolate, sparsely cultivated country the Bhotis carry little back with them from India. The amount of grain which they can take with them is not much, as they have disposed of their means of carriage."

CENTRAL PROVINCES MEMORANDUM.

The period for which the Hemp Drugs Commission require statistics begins with the year 1873-74, when the Act in force in the Central Provinces regulating excise matters was No. X of 1871. The only section of that Act which authorized the levy of a duty or tax on hemp drugs (then included with opium in the term "intoxicating drugs") was section 24, which provided as follows:

"Whenever a license for the retail sale of * * * * intoxicating drugs is granted under this Act the Collector may demand, in consideration of the privilege granted, such tax or duty, or a tax or duty adjusted on such principles, as may from time to time be fixed by the chief revenue authority."

1871-72.

2. In the first year for which the Act was in force, *i.e.*, 1871-72, the revenue from "drugs" was Rs. 70,713, that from opium being Rs. 1,71,316. "Drugs" included "madak," in spite of the fact that madak was known to be merely a preparation of opium. The monopoly of vend of "drugs," either for each district as a whole or for small areas, was everywhere put up to auction and knocked down to the highest bidder. The monopoly of the vend of opium was sold separately; but in most cases the same person took both it and the monopoly in respect of "drugs." From paras. 24 and 25 of the Excise Report for the year it appears that the desirability of separating receipts from ganja and those from madak was making itself felt, and also that proposals for restricting cultivation of the hemp plant were under consideration.

1872-73.

3. In this year madak was not classed with ganja, and the revenue from the latter fell from Rs. 59,625 in 1871-72 to Rs. 55,824, or by nearly 7 per cent. The bids for the right to retail madak in 1871-72 had fetched Rs. 11,087, and that and the opium monopoly were sold together for the first time in 1872-73. In almost every district a few hemp plants were to be found in the gardens of cultivators, and it was only in Raipur and Bilaspur that a license fee was imposed on cultivation. The right of retail vend of ganja was, as before, auctioned by circles, the circle sometimes being as large as a tahsil, sometimes much smaller. The expediency of restricting cultivation was still being considered. The number of shops in the year was 987.

1873-74.

4. For some years past our retail contractors had complained that the extensive cultivation of ganja for home consumption by private individuals seriously interfered with their profits and prevented them from paying to Government as high a revenue as they otherwise might. In December 1873 Deputy Commissioners were accordingly asked to report on the following points:—

(1) whether the people would be inconvenienced if the cultivation of ganja was prohibited except under license and in the vicinity of tahsils where existing establishments could check the produce and see it stored;

(2) whether the ganja sold under existing arrangements by retail contractors was home-grown or imported.

The reports received showed that all retail contractors except those of Bilaspur obtained their ganja from either Nimar or Nagpur, and that in every district, except perhaps Hoshangabad, Narsinghpur, Mandla, Chhindwara, and Bilaspur, the amount privately grown for home consumption was insignificant, while in Sambulpur it was *nil*, home-growing having been prohibited by executive order of the Deputy Commissioner. The Commissioner of Excise then moved the local Administration to restrict cultivation to the Kotal and Khandwa tahsils and to impose a license fee on each acre cultivated.

Meanwhile the Government of India had been enquiring into certain allegations regarding the effects of ganja and other preparations of the hemp plant, and on the 17th December 1873 all local Governments were instructed to discourage the consumption of ganja and bhang as far as possible by placing restrictions on their cultivation, preparation, and retail, and imposing on their use as high a rate of duty as could be levied without inducing illicit practices.

Acting on these instructions, and recognizing that section 40, Act X of 1871, only authorized such supervision of cultivation as might be deemed necessary to secure the duty leviable on the manufactured drug, the local Administration directed the Commissioner of Excise to prepare rules limiting cultivation to licensed fields in localities where existing revenue establishments were available for purposes of supervision, and fixing such a rate of license fee as would be a sensible impost on the value of the produce.

The financial results of the year were not satisfactory, the revenue falling from Rs. 55,824-2-9 to Rs. 50,707-12-0 in spite of the fact that in Sambulpur the monopoly of retail vend was sold for the first time and brought in Rs. 325. Shops numbered 1,133, but their distribution was palpably faulty.

1874-75.

Ch. VIII of Excise Manual, 1875.

5. In April 1875 rules for controlling cultivation were sanctioned, the main object of which was to put a stop to the practice of growing for home-consumption. Cultivation, except under license from the Deputy Commissioner, was prohibited, and no license was to be obtainable for plots of less than an acre in extent. Moreover, each cultivator was bound to obtain from the Tahsildar a license to cover the possession of his gathered crop until its sale to a licensed vendor or exporter, and stocks were made liable to inspection by Excise officers of all grades at all times. The rules also provided for the levy of a fee per acre on cultivation, but no fees were fixed till the year 1875-76: in Raipur and Bilaspur the old rate of fees, *viz.*, Rs. 0-8-0 an acre, remained in force. For facility of reference Chapter VIII of the Excise Manual, 1875, has been reprinted and annexed as Appendix B* to this Memorandum.

The revenue of the year was derived, as before, by auctioning the monopoly of vend, and competition at the sales resulted in bids rising from Rs. 50,707-12-0 to Rs. 56,263-2-1, or by nearly 11 per cent. Shops numbered 1,261, or 1 to every 6,478 of the population served; in Nagpur City and in the interior of Hoshangabad there were 18 and 141 respectively, allowances which were declared in the Resolution on the Excise Report for the year to be "inordinate." The acreage fees on cultivation in Raipur and Bilaspur amounted to Rs. 819-8-0, and these have been shown as fixed duty in Appendix A.

1875-76.

6. The rules of 1875 were in force throughout the year 1875-76, but they did not influence the revenue of the year which was settled at the auction held before their issue. That revenue was Rs. 54,245-10-11, excluding acreage fees on cultivation, which amounted to Rs. 807-8-5.

The acreage fee was fixed tentatively for one year at Re. 1 per acre; the amounts realized are shown as fixed duty in Appendix A. Receipts under this head were very small in Raipur and Bilaspur compared with those for the preceding year, and probably indicate that scattered cultivation had considerably diminished. The statistics of area cultivated and number of licenses granted are not quite complete, but it may be taken as certain that only in the Khandwa and Katol tahsils was ganja produced in any large quantities; the districts of the Nerbudda Valley with Saugor and Damoh drew their supplies from Khandwa, while the hill districts of Betul, Chhindwara, Seoni, and Mandla and the entire Nagpur and Chhattisgarh Divisions imported from Katol. The terms on which licensed vendors of different districts obtained their supplies appeared to have varied greatly, but a uniform retail price of 1 pice weight for 1 pice prevailed all over the provinces. Retail shops numbered 1,254, or 7 less than in 1874-75; 12 had been closed in Hoshangabad, where the allowance had been condemned by the Chief Commissioner as excessive, but Nagpur City was still left with 18.

Looking to the total population, the incidence of revenue from ganja per head fell at the rate of 1¼ pie, or less than would suffice at that time to buy an ordinary smoker one day's supply of the drug.

1876-77.

7. The old system of raising the revenue was adhered to in 1876-77, *viz.*, (1) selling the farms and allowing the contractors to make their own arrangements for obtaining the drug, (2) levying an acreage fee on cultivation. These sources yielded respectively Rs. 58,995-12-5 and Rs. 1,630-4-0. The improvement in bids for the right of retail vend appears to have been due to rising confidence in the arrangements for the control of cultivation, but the Administration recognized that, no matter what precautions were taken, much ganja must be reaching consumers which had paid little or no duty, and that bidding would not be keen until every crop raised was taken under direct control.

In this year a special penal fee on unlicensed cultivation was introduced: the Re. 1 rate was made applicable only to cases in which a license was obtained before sowing, and Rs. 10 was to be levied on every acre or fraction of an acre not so protected. The penal rate was realized in 33 cases in Jubbulpore and in a few cases in some other districts. The effect of the restrictions which had by this time been placed on the right to cultivate freely was most marked in Raipur and Bilaspur, if the increase in the amounts bid for the right of retail vend in those districts was due to it, as appears to be the case; but the decline in the number of licenses applied for and the amount of fees levied was so sudden and rapid as to justify a suspicion that unlicensed cultivation of small plots must have been going on undetected.

The table below, bringing together statistics for three years, will make the above remarks clearer:—

Year.	Raipur.			Bilaspur.		
	No. of licenses to cultivate.	License fees.	Bids for right of retail vend.	No. of licenses to cultivate.	License fees.	Bids for rights of retail vend.
		Rs. A. P.				
1874-75	983	491 8 0	2,184	656	328	417
1875-76	64	64 0 0	3,850	104	70	678
1876-77	*Nil*	*Nil*	4,020	6	33	981

* Not printed.

The number of permanent retail shops open during the year was 1,226, but of these 123 (in Bilaspur 102, Nursinghpur 4, and Bhandara 17) were open on bazar days only. In Hoshangabad the number had been again reduced till each shop had an average population of over 5,000 persons to serve. The incidence of revenue per head of total population rose from 1¼ to nearly 1½ pie. Of consumption no satisfactory estimate can be made: in the Excise Report of the year 1,000 maunds was stated to be the probable amount.

1877-78.

8. Similar arrangements to those of 1876-77 were in force in the Khalsa. The most important measure taken during the year was the extension of the Khalsa rules regarding the cultivation and possession of ganja to the zamindaris both feudatory and non-feudatory, of the Chhattisgarh Division. Very little, however, was done towards assimilating practice in those zamindaris to that in the Khalsa, the order on the subject having issued only a short time before the cultivating season began.

The revenue of the year was raised in the same way as that of 1876-77. Bids for the right of retail vend improved from Rs. 58,995-12-5 to Rs. 62,894-14-10, all districts except Narsinghpur and Sambulpur contributing to this result. The penal rate of acreage fee (Rs. 10 per acre) was in several districts vigorously exacted, and collections under this head amounted to about Rs. 4,000; including fees at the rate of Re. 1 per acre, the tax on cultivation yielded Rs. 6,368-2-9. Statistics of area cultivated are not available for 2 (Wardha and Balaghat) out of the 15 districts in which fees were levied, but it is safe to say that in none except Nagpur and Nimar was the quantity produced at all considerable.

It would appear from the statements for the 2 years that (Appendix A) 82 more retail shops were worked in 1877-78 than in 1876-77; but in the latter year there were 102 bazar shops in Bilaspur, which are not included in the total given in the statement, although they have been taken into account in the remarks in paragraph 7 of this Memorandum, while the number of such shops in 1877-78 is not ascertainable.

The total revenue of the year fell at the rate of rather more than 1½ pie per head of population.

Statistics of the amounts sold by retail are not available, and no trustworthy estimate of consumption can be made. From figures in statement No. VI appended to the Excise Report for the year it appears that 3,419 maunds of ganja locally raised were exported to different parts of the Central Provinces, while imports from other British territory and foreign territory amounted to 532 maunds, so that in all 3,951 maunds were imported. Adding for the undermentioned non-importing districts the amounts which were probably consumed as well as raised in them respectively, *viz.*:—

Nagpur	1,000
Seoni and Chhindwara	200
Nimar	300

a consumption of nearly 5,500 maunds seems to be accounted for. But much ganja was doubtless consumed in Chanda which had been illicitly brought from the Nizam's Dominions, while in the Chhattisgarh Division a considerable portion of the demand must have been met by the produce of the bordering zamindaris and feudatory States. Raipur and Chanda between them imported under due authority* 376 maunds, but Bilaspur and Sambulpur made no such importations. On the whole it would be safe to put consumption at 6,000 maunds as a minimum: the estimate in the Excise Report for the year is apparently about 5,000 maunds, but from it are excluded imports into districts of the Central Provinces from elsewhere than Nagpur and Nimar.

* Paragraph 6, Chapter VIII of Excise Manual, 1875.

(Appendix B).*

Paragraph 33.

In reviewing the Provincial Excise Report for 1876-77 the Government of India remarked that they were prepared to consider any suggestion that might be made for restricting the use of ganja, and again in March 1878 they approved of the Chief Commissioner carrying out measures for restricting the cultivation of ganja and imposing on the drug gradually, or otherwise, as heavy fiscal burdens as it could be made to bear. Accordingly the subject had a large share of the Chief Commissioner's attention during the next 3 years.

1878-79.

9. In November 1878 a new set of rules under paragraph 2 of section 40, Act X of 1871, was issued.

The Judicial Commissioner, to whom a draft for concentrating cultivation of the hemp plant in the Katol and Khandwa tahsils and for the imposition of a prohibitive acreage tax on cultivation elsewhere had been submitted, pointed out that as the Act of 1871 merely authorized *superrision* of cultivation, cultivation without a license, even if the licenses were granted gratuitously, could not legally be prohibited, nor could any acreage tax be imposed. The rules finally sanctioned provided (1) that cultivators of the hemp plant should give notice of intended cultivation, its locality, extent, &c., (2) that they should give similar notice of their intention to cut, (3) that their crop should be stored in Government godowns or in authorized private store-houses, and that it should only be removed therefrom on payment of the Government duty. The duty fixed by the Chief Commissioner after considerable deliberation was Re. 1 per seer, equal to Rs. 40 per maund.

* Not printed.

These provisions seemed to be workable enough, especially as in only 2 districts was there anything like systematic cultivation of the hemp plant. Unexpected difficulties, however arose in the disposal of the produce by cultivators to wholesale dealers and licensed vendors. The Commissioner of Excise was present both in Nagpur and Nimar on the occasions when sellers and buyers met for the disposal of the produce. At Nagpur the wholesale dealers held aloof, being uncertain of the effects which the enhanced duty demanded on the drug might have on consumption, while the retail vendors were not prepared to purchase direct or otherwise than in previous years from the wholesale dealers. In Nimar also sellers and buyers failed to come to an understanding. Accordingly it was found necessary, in order to guard the cultivators against loss and to secure to Government the control of the entire crop, to purchase on behalf of Government 1,856 maunds of ganja in Nagpur and some 5,000 maunds in Nimar at a total cost of nearly Rs. 50,000. These quantities together represented nearly the entire crop of the year in the Central Provinces, so that practically Government obtained a monopoly of the drug.

The small cultivation of ganja in districts other than Nagpur and Nimar was specially dealt with. The Wardha crop was taken over by the Deputy Commissioner and forwarded to the Nagpur Store, to be there dealt with like the produce of the Katol Tahsil. In Betul, Chhindwara, Narsinghpur, and Raipur the whole produce was put up to auction and sold to licensed vendors, the upset price fixed being Rs. 36 per maund: the cultivator's share of the proceeds was fixed at one-seventh.

10. The revenue was Rs. 83,144-0-3, of which Rs. 1,727 was collected on licenses to cultivate, a source of income which had now to be finally abandoned in accordance with the opinion of the Judicial Commissioner on the draft rules as first drawn.

Bids for the right of retail vend increased by Rs. 18,522-1-5, Mandla and Chhindwara being the only districts which did not contribute to this improvement. The auctions had been held much earlier than usual in order to give licensed vendors generally a fair opportunity of buying their supplies direct from producers: hitherto the principal ganja crops had been for the most part bought up by a few persons for purposes of wholesale vend. Another probable cause of the improvement was the selling of the monopolies as far as possible in small circles, instead of in lump or by tahsils or large circles, as had previously been the practice in several districts.

The incidence of revenue rose to very nearly 2 pies per head of population. The number of retail shops which worked during the year is not ascertainable, but was probably much the same everywhere as in 1877-78.

11. With a view to administrative efficiency as well as economy the district formerly known as "Upper-Godavery" was abolished in this year, a small portion being transferred to the Madras Presidency and the remainder being constituted a sub-division of the Chanda district and styled "Sironcha." For the sake of preserving uniformity throughout Appendix A, the statistics relating to the Upper-Godavery district have all along been included in those of Chanda.

1879-80.

12. The arrangements for raising the revenue in 1879-80 were peculiar, owing to the position in which Government found itself as holder of almost the whole provincial stock of ganja. In five districts the circles of vend were not sold at all, but farms were given to men of capital and position, who engaged to find retail vendors and to keep them supplied with ganja taken as it came in the uncleaned state from the Government stores, paying only duty at certain fixed rates on removal from the Stores: those rates were as under:—

		Rs.	A.	P.	
Jubbulpore District...	Jubbulpore tahsil	2	12	0	per seer.
	Sehora and Murwara... ...	3	0	0	„
	Narsinghpur District... ...	3	6	0	„
	Hoshangabad „	4	4	0	„
Nimar District ...	Khandwa and Burhanpur tahsils	5	0	0	„
	Mortaka tahsil	4	1	0	„
	Mandla District	5	0	0	„

In the remaining district the monopoly of retail vend was sold in the usual way, at first for 3 months and then for the rest of the year. The plan tried in the 5 districts above named, though not an absolute failure, was soon found in practice to be open to serious objections: the farmers, not being bound to work in earnest in order to be able to pay stipulated instalments to Government, did very little towards ensuring an adequate supply to the public. For the last nine months of the year, therefore, in the remaining 13 districts the retail monopolies

were left in the hands of the men who had bought them for the preceding quarter at the old monthly rates of license fees and on the condition that they purchased only at a Government store or from distributing agents appointed by Deputy Commissioners. Wholesale vendors were employed as distributing agents on a commission at rates varying from 9 pies to 1½ anna per rupee on the fixed selling price of Rs. 2-14-0 per seer: this price included both the cost to Government and the fixed duty.

13. The ganja issued for consumption in the year was for the most part raised in the season July to November 1878, and in respect of that season's crop no difficulty in realizing duty under the arrangements just described was experienced. But at the close of the preceding year there were stocks of old ganja, the produce of the autumn of 1877, and on these a duty of Rs. 30 a maund was made leviable under the Chief Commissioner's orders: where these stocks in the hands of any one person exceeded 1 maund, a special rate in excess of Rs. 30 a maund was exacted; but in several districts payment of duty was evaded, licensed vendors having been allowed, in spite of orders to the contrary, to purchase, after the close of 1878, quantities largely in excess of what was necessary to carry them on to the end of March 1879.

14. "Bhang" (foreign) was taxed this year for the first time, but statistics of receipts under this head are not available till 1882-83. The rate first fixed was Rs. 8 per maund, and any licensed retail vendor was permitted to import what he required on prepayment of duty at that rate. At the same time a rate of Rs. 10 was imposed on charas. The rate on bhang was raised in July to Rs. 8 per maund less than that charged for ganja, *i.e.*, to over Rs. 100 per maund, taking the ordinary ganja rate to be Rs. 2-14-0 per seer. The cost price in Rajputana and other sources of supply was Rs. 10 to Rs. 12 per maund. From records in this office it appears that in the preceding half of the year 1879 about 7 maunds were imported into Nimar, Hoshangabad, and Jubbulpore, and that in those districts and also in Chanda, Seoni, Saugor, and Raipur there were old stocks amounting in all to 22 maunds 24 seers. The only districts in which there was any licitly imported charas was Jubbulpore, and the amount there was 37½ seers only.

On "local bhang," or refuse ganja, a duty of 3 annas per seer was imposed, the article being issued to licensed vendors at this rate from the Government stores. The chief use of this was as medicine for cattle to get them into good condition.

15. In this year Ganja License Forms VII and X, prescribed by Notification No. 4627, dated the 5th November 1878, were cancelled, and licenses published with Notification No. 996 dated the 12th March 1880, substituted therefor. This step was taken at the instance of the Commissioner of Excise with the object of protecting our revenue against smuggling by rail from foreign territory or from British territory beyond the Central Provinces. Ganja was cultivated in particular in the Indore territory south of the Nerbudda, 7 villages in which the plant was raised forming a group round Sanawad on the railway line between Khandwa and Indore and constituting what was almost an island of foreign territory within the Nimar district. The amount of ganja raised annually was about 1,500 maunds, and this could be bought on the spot at from Rs. 2-4 to Rs. 2-8 a maund, no pass or permit being required. The badness of the roads and the insecurity of life and property throughout Central India rendered it practically impossible for traders in this ganja to reach a market otherwise than by rail and therefore by passing through British territory. It was obviously essential to keep a watch on consignments so sent, and rules 7 and 8 of the Notification of November 1878 were meant to be read, with Forms VII and X, as requiring imports from outside the Central Provinces to be taken to a Government store-house under one license (Form VII) and then exported under another (Form X). But Form VII merely required that imported ganja should be delivered at the Central Store, "to be there disposed of according to the orders in force for the produce of cultivators resident beyond the Central Provinces." It was therefore found necessary to provide specifically for the examination of consignments booked to railway stations within the Central Provinces, and the revised Form VII contained the necessary conditions. At the same time Form X, which in its original shape was practically useless, was altered so as to render all ganja, whether purchased within the Central Provinces or in course of transit through them for sale in other parts, liable to examination by any Provincial Excise officer at any time.

16. The gross receipts under ganja for the year were Rs. 89,937, but the arrangements for securing payment of the newly imposed direct duty cost Rs. 6,636, so that net receipts were only slightly in excess of those for 1878-79.

The quantity of ganja sold retail was nearly 600 maunds, representing some 800 maunds of uncleaned hemp, but it would not be safe to conclude that this represents anything like the quantity actually consumed during the year. In Nimar only 6 maunds 24 seers of ganja were sold under the sanctioned arrangements, but there can be no doubt that this amount was quite insufficient for the wants of the district, and smuggling from the Sanawad pargana of Indore is known to have gone on to a great extent. Retail prices everywhere ruled much higher than they had ever done before, the cost price to licensed vendors being nowhere less than Rs. 2-12-0 per seer, or about 2 pice for one pice weight. The total number of retail shops rose to 1,223, but the figures for districts differ greatly in many instances from those of 1877-78 and

1878-79, and no satisfactory explanation of the differences can be given. In Bilaspur and Sambulpur bazar shops appear to have been included in the enumeration: elsewhere there were generally fewer shops, to judge from statement IV appended to the Excise Report for 1880-81.

It is difficult to believe that only 252 acres were under ganja in the year in Nimar, but enquiry on the point has failed to bring any other statistics to light. The produce of the Katol Tahsil amounted to 250 maunds, but the area cultivated cannot now be ascertained.

1880-81.

17. The Government of India, in sanctioning disbursement of the money which had been spent in 1878-79 in purchasing the crop of that year and also old stocks left in the hands of certain dealers whose licences expired on the 31st March 1879, and were not renewed, remarked that they were not disposed to favour the permanent creation of a Government monopoly of ganja. Accordingly, for 1880-81 the monopoly of wholesale vend for the whole province was granted to a single contractor (Kaluram Marwari of Kamptee), who agreed to pay a direct duty of Rs. 2 per seer on all ganja sold by him to retail vendors and to issue the drug to retail vendors at Rs. 3 per seer. Under the agreement, the text of which will be found in Appendix D,* hemp drugs other than ganja were to be supplied to retail vendors at certain fixed rates per seer: those rates and the corresponding rates of duty payable to Government were :—

	Rate of supply. Rs. A. P.	Duty. Rs.
Charas	24 8 0	16
Foreign majum	24 8 0	16
„ bhang	2 2 0	1
Local „	0 8 0	*Nil.*

Charas and foreign majum were never actually imported. For local majum, a confection made of sugar, ghi, and local bhang, separate retail licenses at the same rates as those for sale of ganja were required. In the first 8 months of the year local bhang was taxed at the rate of 0-2-0 a seer, the right of selling it by retail being limited to the wholesale vendor of ganja and his agents, but in November 1880 the Chief Commissioner directed that clean ganja only should be issued from the Government stores, all refuse, including local bhang, detached in the process of cleaning being systematically destroyed, and further that at any subsequent cleaning which might be found necessary the additional refuse should be similarly dealt with.

18. Kaluram bought up so much of the Nimar and Katol crops of the season July to November 1879 as was in the hands of cultivators, and also all Government ganja left in the provinces on the 31st March 1880, except a surplus of some 5,000 maunds at Khandwa, which he agreed to sell on behalf of Government in return for a commission on sales. He was bound to apply the ganja he purchased for home consumption in the first instance: if any remained over, it might be exported, one-half of all profits realized in this way being payable to Government.

Distribution to retail vendors was provided for by requiring Kaluram to appoint and maintain an efficient and respectable agent at the head-quarters of each district and the head-quarters of each tahsil except Sironcha, which was supplied from Cocanada in the Godaveri district of the Madras Presidency and from the Nizam's dominions.

The right of retail vend was disposed of in a new way: instead of auctioning the monopoly by circles, monthly licenses were issued at fixed rates varying according to the size of the town or village and without limit as to the number of licenses existing in one place.

19. The gross revenue of the year was Rs. 92,850-12-8, or more by 3·2 per cent. than that of 1879-80. Sales by retail vendors under the sanctioned arrangements rose from nearly 600 maunds to 839 maunds 19 seers, or by 40·1 per cent., and the amount of direct duty realized by Rs. 5,228, or 8·8 per cent. only.

License fees for the right of retail vend fell off by Rs. 2,315, or 7·5 per cent.

It will be readily understood, however, that the statistics of the two years cannot be satisfactorily compared. In 1879-80 no amounts *quâ* license fees proper were realized in 5 districts, while in the rest the charge of Rs. 2-14-0 per seer made to licensed vendors included the cost of the ganja supplied as well as direct duty, though the whole has been shown in column 34 of the statement in Appendix A under the latter head: moreover, old stocks which never paid duty and consequently were left out of the account of consumption must have found their way from the hands of the contractors who owned them into those of the smoking public.

Accurate information as to the exact number of retail shops worked is not forthcoming. In several districts the returns fail to distinguish sufficiently between licenses issued and shops opened.

1881-82.

20. The arrangements for this year were shaped by the necessity of getting rid of the Government stock of ganja, amounting to 3,000 maunds (uncleaned), which remained in store at Khandwa.

*Not printed.

Accordingly, the representatives of Kaluram, the wholesale contractor for 1880-81, were given a contract for supplying the whole province on condition of their taking over this stock for Rs. 18,000, besides purchasing the crop raised in 1880 in Nimar only : that crop was estimated at 2,500 maunds.

The agreement entered into with the firm will be found in Appendix F.*

It will be observed that the wholesale supply of ganja, &c., was left entirely in their hands, and that they were required to maintain an agent at the head-quarters of each district and tahsil (except Sironcha, where the existing arrangements were allowed to stand). With a view to avoiding unnecessary loss to the firm from cost of carriage of refuse stuff, it was arranged that the cleaning of the ganja should ordinarily be done at Khandwa or at Nagpur, but where the journey was likely to produce considerable injury to the drug, Deputy Commissioners were instructed to arrange for its being cleaned at its destination. The stocks maintained by the agents were to be examined by the tahsildar, or in his absence by the naib-tahsildar, every fortnight. The examining officer was required to deduct the amount of the closing balance for the fortnight from the total of the opening balance and of any subsequent additions to stock : on the difference so ascertained and verified, which represented the amount sold by the agent, duty had to be paid. Each agent of the firm was provided with a license for the wholesale vend of ganja, foreign bhang, charas, and majum, and also for the retail vend of the last mentioned article.

In most districts retail vendors held their shops as in 1880-81, *i.e.*, on monthly licenses at rates which varied in different localities and without restriction as to the number of licenses granted in any one place. In Seoni and Saugor shops were auctioned on the old system, and there was a large increase in receipts from license fees in those districts.

21. The revenue of the year was made up as under—

	Rs.
Direct duty	67,892
License fees	29,344
TOTAL ...	97,236

Sales to retail vendors increased from 838 to 869 maunds, but the increase was not general, for in seven districts, and particularly in Bilaspur and Seoni, sales declined. Receipts from license fees were larger than in 1880-81 in 8 districts only : the system of monthly licenses, which had by this time been given an extended trial, was found to be unsuitable, accurate information having still to be collected as to the approximate consumption in different localities.

22. Statistics of cultivation in Nagpur for the 3 years 1879-80 to 1881-82 are not forthcoming. It will be remembered that Government bought up the crops of 1878, and Kaluram those of 1879 in both Nimar and Katol. The Nimar crop of 1880 was purchased by the firm which succeeded to Kaluram's business, and that, together with 3,000 maunds purchased from Government, made it quite unnecessary for them to have any dealings with the Katol cultivators. Great difficulty had been experienced in coming to terms with the Katol men in respect to the crop raised in 1879 ; they had sold the produce of 1878 to Government at rates varying from Rs. 7 to Rs. 10 a maund, but for that of 1879 they held out for Rs. 30 per maund. Eventually, after the Chief Commissioner had been petitioned in the matter, the Commissioner of Excise was requested to settle the price in a manner which would leave the cultivators no ground for complaint, and in the end payment at the rates given in the preceding year was agreed to by all concerned, the cultivators being at the same time distinctly warned that if they chose to grow ganja in the future they would do so at their own risk, as there was no chance of the Government again arranging for its purchase. In spite of this experience, about 1,100 maunds were brought to the Nagpur Store-house at the close of 1880, and this the firm of Jaitram Mahadeo declined to buy, having, as already remarked, obtained a fully adequate supply in Khandwa under the terms of their agreement with Government. The cultivators then demanded that their entire stock should be purchased by Government, but as they had received fair warning that they would have to make their own arrangements for finding buyers their petition was rejected. Many continued to hold out for the purchase of their produce in lump, but some were in the end induced to part with it in lots to different dealers. All appear to have refrained from raising ganja in 1881 in consequence of their failure to obtain the terms they had insisted upon ; their energies were directed throughout the year to agitating for reconsideration of the orders passed, and after unsuccessfully moving the Government of India they memorialized the Secretary of State. No certain explanation of the sudden diminution of area under ganja in Nimar can now be given : it is, however, known that the Indore crop of 1879 was unusually large (4,000 maunds against 1,000 in the preceding season), and that exports from Nimar in 1880-81 did not exceed 75 maunds, and the knowledge of these facts and of the existence of a large stock in the hands of the provincial contractors must have made cultivators doubtful whether a local crop, if raised in 1881, would find any purchasers.

* Not printed.

No licenses to cultivate were granted in these 3 years, inasmuch as the rules of November 1878 did not provide for this formality: any one might cultivate, provided that he gave written notice of his intention to do so.

Excise Act, 1881.

23. During the early part of the year 1881-82 the Bill which eventually became the Excise Act, 1881, was under consideration. The Act of 1871, so far as it related to hemp-drugs, had been found wanting in three important particulars, *viz.*:—

(1) It only empowered the Chief Commissioner to place cultivation, preparation, and store under *supervision*—section 40.

(2) It did not make the mere importation without a license, irrespective of the quantity of the drug imported, punishable—section 63.

(3) The punishments for illicit manufacture, sale, and possession were inadequate—sections 62, 63, 64.

The Chief Commissioner proposed to remedy the first and third defects by means of a special clause worded as under :—

"In the Central Provinces—

(*a*) the cultivation of hemp,

(*b*) the manufacture of intoxicating drugs,

(*c*) possession of the intoxicating drugs,

(*d*) the import, export, and transport of intoxicating drugs,

are prohibited, except as permitted by this Act or by rules framed under this Act by the local Government, which may grant such permission absolutely, or subject to the payment of duty, or to any other condition."

The Bill, however, was considered by the Government of India to give all the powers required for controlling cultivation, manufacture, and storage, and the second para. of section 11 of the Act corresponds word for word with that in the Bill; the wording is as follows:—

"In the other territories to which this Act extends, the chief revenue authority may, from time to time, make such rules to restrict and regulate the cultivation of hemp and the preparation of intoxicating drugs therefrom as it may deem necessary to secure the duty leviable in respect of those drugs."

As for *importation*, it appears to have been thought that reduction of the quantity which might be sold by retail and possessed by a private person from 20 to 5 tolas in the case of ganja would meet all the requirements of the case. In the Bill as first drawn the limit of quantity in respect of bhang also was reduced from 20 to 5 tolas, but in the Act the old limit of 20 tolas is retained. The law as to import is therefore in the same state as under Act X of 1871, the only difference being that a penalty is now provided (sections 20 and 42) for breach of rules "to regulate the grant of licenses or passes to persons possessing or transporting intoxicating drugs for the supply of licensed vendors," whereas formerly no punishment was provided for breach of such rules. With regard to *penalties*, the Act of 1871 had made offences in respect of hemp drugs punishable by fine only in the first instance, and imprisonment in default of payment was in the civil, not in the criminal, jail, except in the case of permitting drunkenness, etc., on shop premises. The new Act gave power to sentence in respect of all such offences, except those under sections 40 and 41, to imprisonment of either description extending to three or four months, in lieu of, or in addition to fine, and it contained no provision prescribing imprisonment in the civil jail for default of payment of fine.

1882-83.

24. In February 1882 rules regarding the cultivation, sale, transport and import of ganja were made by the Chief Commissioner under sections 11, 13, 20, and 55 of the Act of 1881. They are printed as Appendix G* to this Memorandum. Cultivation was thus definitely restricted to the tahsils of Katol and Khandwa, and cultivators were required to obtain licenses and to deposit their crops in the Government store-houses at the head-quarters of those tahsils.

The arrangements for raising the revenue in 1882-83 were in strict accord with these rules, and, as they have not since been materially altered, it is worth while to give an account of the main principles underlying them. In the first place the interests of cultivators demanded that the monopoly of wholesale vend should no longer be left in the hands of a single firm: accordingly wholesale vendors were appointed for each district separately. Next to protect wholesale vendors, in case cultivators should combine for the purpose of exacting unfair prices for their produce, import under passes from extra-provincial markets was permitted. Thirdly, in order to ensure supply to retail vendors of a good marketable drug for consumption by private persons, the rule introduced in 1881-82, that ganja, before being issued for retail sale, should always be cleaned to the satisfaction of the Deputy Commissioner, and that all resulting "bhang" or refuse should be immediately destroyed, was maintained. Monopolies of retail vend were in most districts auctioned, the locality and number of shops being fixed beforehand, and none being allowed except where a reasonable demand for the drug was proved to exist. It will be remembered in this connection that the system of monthly licenses

* Not printed.

at fixed rates issued without limit as to the number of shops at any one place had not generally answered, the reason being that sufficient data for deciding what fee might fairly be fixed in each case were not available.

The sale of foreign bhang was no longer permitted to retail vendors of ganja: wholesale ganja contractors and their agents were constituted sole vendors of the drug. The bhang imported had to be stored in the same way as ganja, and a direct duty of Rs. 2 was made leviable on each seer sold. No fee was payable for a license for retail vend of foreign bhang.

Charas and foreign majum had never been imported, so no provision for their sale was required. The case of local majum appears to have been overlooked when the rules were framed; but the plan started in 1880-81 of licensing separate shops for its sale continued to be followed in practice. (See para. 17.)

25. Advantage was taken of the opportunity afforded by the breaking up of the monopoly of wholesale vend to obtain some revenue from wholesale license fees. The arrangement with the firm of Jaitram Mahadeo had been to levy duty at Rs. 2 per seer on the cleaned ganja issued, and to allow them to sell that ganja at Rs. 3 per seer to retail vendors. The terms of that arrangement were more favourable than the circumstances of most districts justified, and each wholesale vendor had henceforward to pay a certain amount per seer in addition to the direct duty of Rs. 2, the rate varying in different districts and being generally determined by tender.

26. The Sironcha sub-division of the Chanda district had from the first, as already remarked, been excluded from the system of supply prevailing in the rest of the province. Retail vendors had always supplied themselves with ganja from the Hyderabad and Madras country. The rules of February 1882, however, only permitted import by *wholesale* vendors, and licenses could only be granted by the Deputy Commissioner and with the sanction of the Commissioner of Excise. To meet this special case, a rule was added empowering the Assistant Commissioner of the Sironcha sub-division to grant import licenses to any authorized vendor of ganja.

27. The gross revenue of the year, excluding credits to Government on sales of ganja to certain feudatory States in the Raipur district, was Rs. 1,11,095-6-1, made up as follows:—

	Rs.	A.	P.
Direct duty on ganja	47,935	7	10
Wholesale license fees—ganja	11,021	12	2
Retail	50,654	9	0
Direct duty on bhang	851	7	9
Retail license fees—majum	632	1	4

The amount of taxed ganja consumed was a few seers short of 600 maunds. Besides this, about 56 maunds were supplied by a wholesale vendor to feudatory States and zamindaris. Retail sales decreased in all districts except Chanda and Damoh, and the fall was very marked in Raipur and Bilaspur, where, however, the statistics given for 1881-82 include sales to feudatories and zamindaris. The pressure of the higher retail rates was now being generally felt by consumers, and smuggling and illicit cultivation had to be contended with in consequence. In some districts, too, the wholesale vendors had supplied old and inferior ganja; to guard against a repetition of this they were required to supply in 1883-84 none but ganja of the crop raised in 1882.

In Sambulpur the revenue had always been insignificant, and the rate per seer for issue to retail vendors was reduced from Rs. 3 to Rs. 2 for that district, in order to give our taxed drug a chance against that smuggled from the Tributary Mahals of Orissa and the States of Chutia Nagpur; at the same time the direct duty was lowered to Re. 1 per seer. Similarly, in the case of the Raipur district, the south and south-east portions of which suffered from the illicit introduction of ganja from Bastar, the rate of issue to retail vendors in the Sihawa Pargana was reduced to Rs. 2, on condition that none should be sold for consumption beyond the limits of that pargana.

For this year and onwards satisfactory statistics of cultivation in Nagpur and Nimar are available. The total amount of the roughly manufactured drug deposited in the Government stores was 4,021 maunds, nearly 5-6ths of which was raised in Nimar.

The number of retail shops was considerably reduced, the most important change being in Balaghat, where the allowance in 1881-82 had been far too large in proportion to population. The average incidence of revenue was a little more than 2¼ pies per head.

1883-84. 28. There were no important administrative changes in 1883-84.

The total revenue from the Khalsa proper was Rs. 1,29,207-2-6, made up as under:—

	Rs.	A.	P.
Direct duty on ganja	59,663	11	9
Wholesale license fees—ganja	10,584	6	9
Retail „ „ „	57,556	14	0
Direct duty on bhang	769	10	0
Retail license fees—majum	632	8	0

In all districts except Hoshangabad and Chhindwara the wholesale ganja contract was given to a single contractor; in the two districts named, the contracts were given by tahsils, as in the preceding year.

29. The amount of ganja sold by wholesale vendors to retail dealers increased by 157 maunds, and there was a consequent rise in the direct duty levied. Wholesale vendors, however, paid on the whole less for their monopolies, the reason being that in some districts a lower rate per seer had been accepted, with the object of leaving the contractor a good margin of profit and so encouraging him to supply good ganja and maintain efficient agents at tahsils.

The lowering of the price to retail vendors from Rs. 3 to Rs. 2 in Sambulpur was supplemented by special efforts to repress smuggling from feudatory States, and by enforcement of the agreement with the wholesale vendor that only good, clean ganja should be supplied: the result of these combined forces was that sales went up from nearly 5 maunds in 1882-83 to 21 maunds, the total revenue being at the same time more than doubled. Other districts in which sales improved considerably were Nagpur, Jubbulpur, Seoni, Raipur and Bilaspur. In Nimar sales fell off largely, but the retail license fee demand more than doubled, circumstances which are explained in the Excise Report for the year by the breaking up of gangs of labourers employed in the preceding year on the G. I. P. and Rajputana railways and by reckless bidding at the sales by two rival contractors who had quarrelled.

No material change took place in the number of shops anywhere except in Sambulpur, where the larger sales of taxed ganja demanded an increase in the number of licensed places of vend.

The incidence of gross revenue per head of population was 2⅔ pies.

30. The amount of ganja taken by feudatories and by zamindars who controlled their own revenue from hemp-drugs was 80 maunds against 56 in 1882-83. The improvement was due to the success in Raipur and Bilaspur of the arrangements made in 1880. The Sambulpur feudatory Chiefs, on the other hand, did not co-operate cordially in the suppression of ganja cultivation, and they took from the district wholesale vendor less than half of the amount taken in the preceding year.

1884-85.

31. In 1884-85 a new form of wholesale license was introduced. The form prescribed in 1882 was not found to be sufficiently complete, and it was supplemented in practice by a separate agreement. The Gazette Notification publishing the substituted form is reproduced as Appendix J* to this Memorandum.

32. The number of licenses for cultivation, the area cultivated, and the quantity of ganja deposited in the Central Stores were all unprecedentedly high in this year. The figures for 3 years are subjoined:—

	1882-83.	1883-84.	1884-85.
Number of licenses to cultivate	... 506	590	1,277
Area under cultivation ...	... 925	1,144	2,881
Ganja deposited ...	(Mds.) 4,021	6,356	9,450

Most of the increase was in Nimar, where a large export trade was developing yearly. In Nagpur cultivation had apparently been resumed by those who in 1881 refused to come to terms with the provincial wholesale contractors: there was a substantial demand for them to meet, as the locally produced drug was then preferred in the Nagpur country to that imported from Nimar.

33. The revenue of the year was made up as follows:—

	Rs.	A.	P.
Direct duty on ganja	66,123	5	6
Wholesale license fees—ganja	12,629	3	3
Retail „ „	81,861	13	4
Direct duty on bhang	921	14	6
Retail license fees—majum	804	8	0
TOTAL ...	1,62,340	12	7

The amount of taxed ganja consumed in the Khalsa proper rose by 11 per cent. and the total revenue demand by 25 per cent. This all round improvement was attributed in the Excise Report for the year to the improved quality of the drug supplied, and the case of Sambulpur, where retail license fees had risen by nearly Rs. 1,000, consumption had almost doubled, and supplies to the surrounding feudatory States had gone up from 4½ to 13½ maunds, was cited as proving the correctness of this explanation.

The total number of shops for retail vend increased from 851 to 921. All except 5 of the additional shops were opened in the Nagpur district, where the retail monopolies were auctioned

* Not printed.

for the whole year instead of being given out from month to month as in 1883-84, when the average number of licenses issued monthly was only 45.

34. In the Excise Report, written by Mr. L. K. Laurie, the year's statistics are remarked upon as follows:—

"While in most districts of the province the number of ganja shops remained stationary, the consumption of taxed ganja increased, in despite of an increase of prices which in some districts followed the enhancement of the license fees for retail vend. The probable explanation is that the improved quality of the issues of the drug attracted anew the consumers who had been driven to seek their supplies elsewhere by the poorness of the stuff sold by Government licensees in 1882-83. In 1882-83 the consumption of ganja decreased in all districts except Chanda * * * and Damoh. In 1883-84 the consumption *increased* in all districts except Nimar. In the year under report the increase continued in all districts except four (Nagpur, Mandla, Damoh, and Saugor). The quantity of taxed ganja consumed in the years 1881-85 was as under. It is not possible to carry back the distinction between the Khalsa supply and supplies to feudatories earlier than 1882-83:—

	Mds. 1881-82.	Mds. 1882-83.	Mds. 1883-84.	Mds. 1884-85.
Taxed ganja consumed in the Khalsa ...	870	609	757	835
„ in feudatories and zamindaris		56	80	125

"These figures show that in the year under report the rebound from the depression caused by the inferior issues of 1882-83 has carried the Khalsa demand to what it was in 1881-82, and probably beyond. It is worthy of note that the check in consumption which occurred in 1882-83 did not affect the fees for wholesale and retail vend. These have in almost every district steadily increased since 1881-82.

"The incidence of the total demand per head of population was 3 pie, as compared with 2 pie in the preceding year. As last year, the incidence was highest in the Jubbulpur, Seoni, and Balaghat districts. The demand in Seoni and Balaghat stands at nearly the same figure as the demand in Raipur, which (following Jubbulpur and Nagpur) is the third highest in the provinces. This position in the list has been maintained by these two districts for several years past."

35. Before passing on it is necessary to note that the powers of police officers under sections 27, 28, and 29 of the Act of 1881 were modified during the year. In February 1884 the Chief Commissioner had authorized Deputy Commissioners to appoint, under section 24 of the Act, any police officer to be an officer for the prevention of excise offences. The Government of India, however, held that Section 20, Act V of 1861, precluded the exercise by the Police of authority as preventive officers, even though they were appointed to perform such duties by the Collector under section 24 of the Excise Act in accordance with rules made by the local Government. The Excise Act was accordingly amended by Act VI of 1885, in order to give local Governments authority to confer preventive powers on the Police. In the Central Provinces the powers exercised are—

(*a*) By all police officers, those conferred on Excise officers by section 27 of the Act.

(*b*) By any police officer in charge of a station or of or above the grade of head constable, those conferred on Excise officers by sections 28 and 29 of the Act.

1885-86.

36. The profits made by cultivators on the crop raised in the autumn of 1884 resulted in a still larger number of licenses to cultivate being taken out in 1885. The quantity (18,071 maunds) of the drug deposited in the Central Stores was also much larger than in any previous year, and, despite the fact that exports to other provinces increased enormously, a considerable percentage of the stock remained unsold. The market having been thus glutted, wholesale prices fell from Rs. 7 to Rs. 2 and Re. 1 per maund, and most of the cultivators suffered in consequence.

37. The wholesale contract for the three districts of the Chhattisgarh Division was given in lump to a single contractor, as in the two preceding years: this arrangement had been necessitated by the fact that men would not tender for the contract of those districts owing to the difficulty of transporting the drug from the Central Stores, the railway line extending at that time only as far as Raj-Nandgaon.

The quantity of taxed ganja sold increased by 160 maunds, one-half of which was contributed by the districts of the Chhattisgarh Division and almost a quarter by the Jubbulpur district. Unlicensed cultivation in feudatories and zamindaris had generally diminished, and in the Raipur district over 200 temporary shops had been established at bazars where illicit ganja used to be secretly sold. In Jubbulpur the retail price was lowered to 1 anna per tola, sales being enormously stimulated in consequence. In other districts the average retail price varied from 1½ to 2 annas a tola, *i.e.*, from nearly 3 to nearly 4 times the price prevailing in 1875-76. The sums bid for the monopolies of wholesale and retail vend also increased, and the

total revenue demand on account of ganja rose by more than Rs. 30,000, the incidence per head of population going up from 3 to 4 pies.

The districts in which the demand was greatest were:—

Jubbulpur.	Balaghat.
Raipur.	Seoni.
Nagpur.	Bhandara.

Jubbulpur, as for years past, was far ahead of any other district, and Raipur now took second place in regard to both revenue and amount of ganja taxed. Balaghat and Seoni occupied the fourth and fifth places, as in 1884-85, but in reverse order.

1886-87.

38. The losses incurred by cultivators in 1885-86 caused them in the following year to take out fewer licenses and to reduce the area under ganja; but in spite of this there was the large outturn of 9,290 maunds, which was ten times the quantity needed for provincial consumption and more than 2,000 maunds in excess of the quantity required for export and provincial consumption combined. As much as 6,000 maunds were exported to the North-West Provinces and Oudh, where the Government were considering the advisability of imposing an import duty on the drug.

39. An important executive order was issued in this year. In 1880 (see para. 17) the Chief Commissioner had directed that ganja should be issued from the Central Stores in as clean a state as possible; but in 1881-82 (see para. 20) and subsequent years the place of cleaning ganja had been left an open question, and it was found that this resulted in tahsildars being overburdened with work in supervising the separation and burning of refuse. It was now made obligatory in all cases to effect a partial cleaning at the Government Store-houses before packing for despatch to tahsils. At the same time the use of "hampers" instead of bags was recommended, and the practice which started thereupon was subsequently enjoined by condition 6 of the form of wholesale license as finally modified in 1891.

40. The consumption of taxed ganja in the Khalsa fell off by 141 maunds, and was only slightly in excess of that in 1884-85. The decline was most marked in the cases of Nagpur, Bhandara, Jubbulpur, and Sambulpur, and it appears to have been due partly to the failure of crops and partly to a further advance in license fees for the right of retail vend. In Sambulpur the monopolies of retail vend were auctioned for the first time, so that retail prices must have been specially affected in that district: up to this time the system introduced in 1880-81 of licensing shops at fixed rates and without restriction as to number had been adhered to, the idea being that smuggling from the surrounding feudatory States would best be combated by placing no limit on the number of licenses that might be issued.

Retail shops increased by 70. There was a *nominal* increase of 34 in Sambulpur, where the figures for previous years are really those of *average number of licenses issued monthly*. 13 new shops were opened in Raipur, where the allowance had always been short, having regard to the growth of population and consumption. Of the 8 additional shops in the Narsingpur district only 3 were actually worked: all were on the Bhopal frontier, and were licensed with the object of checking smuggling from that State.

The provincial incidence of revenue per head of population rose from just 4 to nearly 4½ pies.

1887-88.

41. The outturns of ganja in Nimar had been so large in the years 1884-85 and the two which followed it that additional accommodation had to be hired and the market was overstocked. In order to obviate the inconvenience which had thus been found to result from over-production, a storage fee of 6 pies per maund per mensem, payable quarterly in advance, was imposed upon all ganja deposited in a Government store-house. This impost appears to have brought about the desired result, for the area under cultivation and the outturn were each little more than half of what they had been in 1886-87. Storage fees amounting to Rs. 472 were realized in the course of the year.

In October 1887 another source of revenue was invented, a permit fee of Re. 1 per maund being made leviable on all purchases of ganja effected by persons who, not being licensed vendors under the Excise Act, resorted to the Government Store-house at Khandwa for their supplies. In proposing the imposition of this fee the Commissioner of Excise wrote as follows:—

> "The part played by the Khandwa store as an *entrepôt* for the supply of the ganja demand of those provinces is quite insignificant when compared with its use as a mart for the convenience of foreign purchasers. To it throng traders from Bhopal, Indore, Gwalior, Ratlam, Dhar, Jodhpur, Oodeypur, Rewa, Panna, Baroda, and other States of less note, and licensed vendors from the North-West Provinces compete with contractors from Berar for the purchase of the cultivators' stock. Between 6,000 and 7,000 maunds of ganja have, on the average of the last four years, been annually exported from Khandwa to other provinces and to Native States. For the convenience thus afforded to them all these foreign purchasers pay absolutely nothing."

Permit fees amounting to Rs. 1,028 were realized before the close of the year, and this sum alone more than sufficed to cover the cost of the additions to the store-house at Khandwa, which it had been found necessary to make.

42. In June 1887 the Government of India sanctioned a substantial increase in the rates of duty on round and choor ganja in Bengal, and the Chief Commissioner thereupon requested the Commissioner of Excise to report whether the duty should be raised in this province also.

In reply the Commissioner reported that the effect of raising the duty of Rs. 2 a seer would be to lower the bids for retail vend monopolies, and that it would be specially inappropriate to raise the duty just when consumption had declined owing to the losses which had followed on the failure of harvests, in whole or in part, for two successive years. Accordingly, the rate was left unchanged.

43. Two other suggestions for improving the ganja revenue were submitted, though not recommended for adoption, by the Commissioner of Excise, Mr. L. K. Laurie, in this year, *viz.*, (1) to abolish wholesale vendors, Government purchasing and retailing the drug through its own agents, and (2) to economize establishment by closing the store at Nagpur and prohibiting cultivation in the Nagpur district altogether. The Chief Commissioner agreed with Mr. Laurie in thinking that, on the whole, Government agency was unsuited for purchasing and selling the drug to retail vendors, and that it was best to postpone suppression of cultivation in Nagpur, until the effect of imposing a storage fee upon the extent of that in Nimar had been well ascertained.

44. Supervision of harvesting, drying, and storing of the ganja crop was introduced this year, and has been exercised annually ever since. A case had been brought to light of a cultivator having a considerable quantity of the drug in his possession at his village-home, and there was thus reason to believe that many of the complaints of smuggling were due to secret disposal of ganja illicitly kept back by cultivators. The following establishment was accordingly entertained for the Khandwa tahsil :—

	Rs.
25 peons at Rs. 5 each for one month	125
5 supervisors at Rs. 20 „	100
Total ...	225

This precautionary measure was not adopted in the Nagpur district, as the area under cultivation and the number of licenses taken out were comparatively small.

45. The total revenue of the year was Rs. 1,92,028-12-1, made up as follows :—

	Rs.	A.	P.
Direct duty on ganja	65,244	8	3
Wholesale license fees—ganja	14,716	3	10
Retail „ „	1,08,633	8	0
Direct duty on bhang	838	10	0
Retail license fees—majum	1,095	14	0
* Permit and storage fees	1,500	0	0

The amount of taxed ganja consumed fell off by nearly 33 maunds, but receipts from wholesale license fees remained at almost the same figure as in 1886-87, *viz.*, Rs. 14,700 in round numbers.

Under retail license fees there was a total decline of about Rs. 17,500, but nearly Rs. 17,000 of this occurred in the districts of Nagpur, Jubbulpur, and Raipur. This was due in the first two districts to a relapse from the high bids of 1886, and in Raipur, where rice is the staple food, to the partial failure of two successive rice crops.

The labouring population, who are the largest class of drug consumers, were placed in exceptionally hard circumstances at the beginning of 1887-88, as the following extract from the Chief Commissioner's Resolution on the Revenue Administration of the Central Provinces during the year ending the 30th September 1887 sufficiently indicates :—

"The seasons resembled in their character those of the preceding year in which the rice crop was a very poor one and the linseed crop an almost total failure. * * * * Owing to the partial failure of the rice crop and to the inferiority of the crop of the preceding year there was a good deal of hardship in the rice-growing districts. A considerable portion of the labouring population was undoubtedly pinched for food to an extent rare in these provinces, and the pressure extended to the poorer cultivators. * * * * * In the northern districts the continuous high prices have unfavourably affected the condition of the labouring poor."

46. During the period of 5 years, the statistics of which remain to be discussed, several important administrative changes were made.

The past quinquennium.

In the first place a registration fee at the rate of Re. 1 per maund was made payable on all sales of ganja to purchasers other than licensed vendors of the Central Provinces, the object being to enhance the charge on exports to Native States and Berar which had been introduced in October 1887, and to obtain from licensed vendors of other parts of British India some return for the conveniences afforded them at the Government Store-house, Khandwa. The "permit" fees had not especially affected export to foreign territory, which were about 3,000 maunds in 1887-88 against 3,300 maunds in 1886-87, and buyers from both foreign territory and the North-West Provinces were inconveniencing our wholesale vendors by forestalling them in the market and by raising the price.

47. Next the period of 50 days allowed to cultivators of ganja, under the rule for removal of their crop to the Government Store-house after permission to cut had been granted, was found

* Not included in statement in Appendix A, as there is no appropriate column in which to exhibit them.

excessive and reduced to 30 days on the recommendation of the Deputy Commissioner, Nimar. It was found that cultivators took advantage of the long period allowed to keep their crop in the villages as long as possible, thus entailing increased expense on Government for watch and ward and securing great opportunities for pilfering and illicit transfers.

48. 1889-90 was the last year in which cultivation was permitted in the Katol tahsil. The cultivators there had never been able since the introduction of the system of levying a direct duty in its existing shape to obtain a fair price for their produce, the reason apparently being that it was of inferior quality. Moreover, it was by this time certain that the amount raised in Khandwa was far in excess of provincial requirements, and would suffice to meet them even in a year of bad harvest. Accordingly, in May 1890 notices were issued to the Katol cultivators that they would not be allowed to raise ganja any more. The formal notification restricting cultivation to the Khandwa tahsil of the Nimar district was not issued till July 1891, the opportunity being taken of revising generally the rules of 1882.

49. The revised rules are printed as Appendix O* to this Memorandum: they are for the most part identical with those of 1882 as amended up to date, but include in addition one (3) relating to the practice of conducting harvest operations under Government supervision and two (6 and 7) calculated to ensure payment of registration and storage fees: a rule (10) was also added prescribing payment of storage fees and at the same time exempting cultivators and wholesale vendors of the Central Provinces from liability to such fees for a period of one month from dates of storage and purchase respectively. A minor change was made in respect of the authority to grant through transport passes, which were to be obtainable only from the Commissioner of Excise, instead of from the Deputy Commissioner of either Nagpur or Nimar.

50. In 1891 rules for the management of the Khandwa ganja store-house were drawn up, and were finally approved of by the Chief Commissioner in December of that year. Those rules are printed as Appendix P* to this Memorandum: they are full and explicit, and do not call for any comment here.

51. Lastly, the conduct of retail shops has been sensibly altered in two ways. In August 1890 the Chief Commissioner directed the insertion in all retail licenses to be thereafter granted for the sale of any intoxicating drug of a condition that consumption on the premises should not be permitted: this condition has been enforced throughout the Central Provinces since the 1st April 1891. The other change consisted in recasting the form of license for retail sale of ganja, and including in it a prohibition of sales on credit and by way of barter and a requirement that purchases shall be made direct from the wholesale vendor for each shop separately, shall be entered in the pass-book of the shop for which the ganja is intended, and shall then be taken to that shop and to no other: the amended form is printed as Appendix Q* to this Memorandum.

52. The total revenue from hemp-drugs has risen during the past 5 years from 2 to over 2½ lakhs, and is now considerably more than double what it was in 1882-83, the year in which the present arrangements for supply of ganja to retail vendors were initiated.

The following table shows how the position of districts has altered during this quinquennium in respect of consumption of taxed ganja and receipts on wholesale and retail licenses for the sale of that drug: the revenue from bhang and majum being comparatively insignificant is not taken into account:—

DISTRICT.	Order of population.		Consumption of taxed ganja.				Wholesale license fees.				Retail license fees.			
			1887-88.		1892-93.		1887-88.		1892-93.		1887-88.		1892-93.	
	1887-88.	1892-93.	Mds.	Order.	Mds.	Order.	Rs.	Order.	Rs.	Order.	Rs.	Order.	Rs.	Order.
Nagpur ...	3	4	57	6	73	7	1,004	5	1,461	7	12,667	2	15,455	2
Bhandara ...	6	6	36	10	62	8	620	10	1,238	9	7,840	5	8,001	8
Chanda ...	7	7	18	16	23	16	...	18	116	18	1,714	17	2,396	17
Wardha ...	10	10	25	14	28	15	249	14	563	15	2,175	16	2,160	18
Balaghat ...	12	11	74	3	118	3	1,284	3	2,367	3	7,281	6	8,691	7
Jubbulpur ...	5	5	114	1	128	2	2,716	1	2,879	2	18,679	1	19,934	1
Saugor ...	8	8	32	11	33	14	468	13	574	14	5,683	8	5,071	13
Damoh... ...	14	16	21	15	34	13	213	16	704	12	3,068	13	3,070	14
Seoni	13	12	65	5	79	6	1,135	4	1,589	6	8,164	3	11,846	4
Mandla ...	17	15	38	9	52	10	901	8	916	10	4,710	11	6,847	9
Hoshangabad ...	9	9	65	4	60	9	976	6	1,274	8	5,201	9	6,014	11
Betul	16	17	17	17	23	17	210	17	400	16	2,833	15	2,936	15
Chhindwara ...	15	14	31	12	35	12	540	11	687	13	5,098	10	6,494	10
Narsinghpur ...	11	13	39	8	35	11	877	9	705	11	7,257	7	5,125	12
Nimar ...	18	18	12	18	19	18	245	15	370	17	835	18	2,509	16
Raipur... ...	1	1	103	2	189	1	1,810	2	3,787	1	8,035	4	12,038	3
Bilaspur ...	2	3	53	7	108	4	935	7	2,156	4	4,398	12	9,936	5
Sambulpur ...	4	2	34	13	95	5	533	12	1,897	5	2,995	14	8,934	6

* Not printed.

The most striking feature of the statistics is the rise of the districts of the Chhattisgarh Division to the position which, in view of their population, they would naturally be expected to occupy. These districts account for more than half the increase in consumption of taxed ganja since 1887-88, and the chief causes at work have been (1) improvement in administration in feudatory States and (2) extension of the Bengal-Nagpur Railway, and in Raipur the construction of water-works. Relations with feudatory Chiefs and with zamindars who enjoy the right of making their own arrangements for retail sale in their estates will be discussed when the subject of smuggling is taken up. Nimar and Betul continue to be the districts where the consumption of taxed ganja is most noticeably short: in the former district cultivators can no longer secrete much of their crop, but ganja is still largely grown in Indore, while in Betul much Berar ganja is undoubtedly consumed. Wardha and Nagpur and in a less degree Chhindwara also are, like Betul, exposed to smuggling from Berar, where the average retail price of ganja is only 6 pies per tola. Seoni and Balaghat have always stood high as contributors to our revenue from ganja: in the latter district licit sales have increased enormously. In Bhandara, where also sales have greatly improved, it is said that the habit of ganja-smoking is no longer considered disreputable, and that the chief cultivating class have taken to it. The Chanda district sales do not include those of the Sironcha tahsil, where retail vendors, owing to the remoteness of the tract, were allowed until the current year to supply themselves under import licenses from foreign territory: the consumption in that tahsil is probably about 6 maunds per annum. The steady rise in the provincial consumption of taxed ganja attracted the special attention of the Chief Commissioner in 1892, and in the Resolution on the Excise Report for 1891-92 the Commissioner of Excise was directed to make enquiry as to whether that drug was ousting either country liquor or opium. This enquiry is still in progress, and until the Chief Commissioner has had the results before him and recorded the conclusions to which they lead, further comment on the statistics just dealt with will serve no useful purpose.

53. Sales of foreign bhang do not fluctuate much from year to year: the average of the past quinquennium is about 12 maunds per annum. This drug is not sold at all in the districts of Chanda, Seoni, and Mandla, and very little in Bhandara and Wardha. Most is sold where Marwaris are most numerous, *i.e.*, in Nagpur, Jubbulpur, Narsinghpur, Hoshangabad, Raipur, and Bilaspur.

54. Statistics of area cultivated and quantities stored and exported for each of the past five years are as under for the Nimar district:—

	Cultivation.	Quantity stored.	Quantity sold for export beyond C. P.
1888-89	858 acres ...	9,450 mds.	5,052 mds.
1889-90	954 „ ...	10,854 „	7,933 „
1890-91	521 „ ...	7,224 „	4,108 „
1891-92	653 „ ...	6,685 „	3,916 „
1892-93	940 „ ...	6,686 „	4,233 „

The fall in 1890-91 was due to the market being overstocked with the large outturn of the previous year, and to the ryots having unsuccessfully combined to resist dealer's low prices: in 1891-92, the losses which had been sustained in this way and excess rainfall prevented any considerable extension of operations, besides damaging the crop raised on the area worked. In the latter year, however, cultivators realized high prices averaging Rs. 8 per maund, and were encouraged to sow more ganja in 1892-93, but the crop raised was again damaged by excessive rain, and the quality was generally inferior. It may be mentioned here that consumption in the Central Provinces themselves has little, if any, effect on the area cultivated, for the reason that only about one-fifth of the crop is consumed locally: during the past five years local consumption, including that of feudatories and zamindaris, has ranged from 1,123 to 1,468 maunds, the annual average being 1,282 maunds. In 1888-89 and 1889-90 there was a little cultivation in the Katol tahsil of the Nagpur district: in the former year 79 acres yielded 377 maunds, the corresponding figures for the latter year being 39 acres and 312 maunds.

During the same period fees at the Government Store-house, Khandwa, aggregated Rs. 46,399. The yearly receipts are not included in the statements in Appendix A for the reason already stated in the footnote to para. 45 of this Memorandum.

Details of the total revenue under this head are:—

	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.
Storage fees ...	1,144	1,631	1,574	1,630	1,396
Permit „ ...	3,135	4,563	2,491	2,474	1,645
Registration fees ...	4,395	7,934	4,190	3,947	4,250
	8,674	14,128	8,255	8,051	7,291

Present retail prices.

55. The average retail price in most districts for small quantities of ganja is 2 annas per tola, but where the full amount of which possession is allowed by law, *viz.*, 5 tolas, is bought, a rate of 0-1-6 per tola is generally taken. In the districts open to smuggling from Native States on the north and west, rates on the border are as low as 0-1-3 and sometimes even 1 anna per tola. In rural areas in the Sambulpur district and also in the Drug and Simga Tahsils of Raipur the rate is 1 anna per tola : in the Sheorinarain Tahsil of the Bilaspur district it is 0-1-3 per tola.

Local option.

56. A system of modified local option in respect to the licensing of *country liquor* shops was introduced into the Central Provinces under the orders of the Government of India in 1889 : such shops are more than six times as numerous as those for the sale of ganja, and no orders for consulting the residents in places where ganja shops are to be licensed have yet been issued. The Administration has all along shaped its policy in regard to the licensing of ganja shops on the assumption that the drug is extremely deleterious, and it is a standing order that no more should be licensed than are necessary to meet the demands of consumers who, if a licit supply were not obtainable, would probably supply themselves illicitly. Moreover, the location of drug shops is a matter of comparatively little importance now that consumption on the premises has been prohibited. Upset prices are not fixed, but no shop is licensed unless a reasonable bid is forthcoming.

Wild hemp.

57. It is believed that the hemp plant does not grow wild in any part of these provinces.

Summary of present system of control.

58. An endeavour has been made in the foregoing paragraphs to trace the development of the present excise system in respect to hemp-drugs in the Central Provinces, and to notice the most striking variations from year to year in the area under the ganja-producing plant, the outturn therefrom and the revenue raised by means of taxing consumption of the two preparations in use, *viz.*, ganja and bhang. It remains to give in a brief yet comprehensive form an account of the system as now worked : the necessary information has been embodied in Appendix R, which follows closely Chapter V of the Excise Manual drawn up in 1885 by Mr. F. C. Anderson, when Commissioner of Excise, and includes also the instructions given in a few important subsidiary circulars.

Untaxed consumption.

59. This Memorandum will now be brought to a conclusion with a brief statement of the difficulties in the way of realizing a tax on all ganja consumed within the province and of the chief measures for combating them which have been taken from time to time.

Section 20.

Small quantities of ganja not exceeding 5 tolas may be legally possessed by any one, and inasmuch as the Excise Act, 1881, only authorizes regulation of import and transport when effected by persons intending to supply licensed vendors, there is nothing to prevent a smoker carrying about, no matter whence obtained, as much as will suffice an habitual moderate consumer for 15 or 20 days. A glance at the map which accompanied the Excise Report for 1889-90 will show that the Central Provinces are cut off by Native States and Chiefships from the rest of British territory except in the extreme south and south-east, in the extreme west and in the north-west, where the border runs for comparatively short distances with those of the Lalitpur, Khandesh, and Godaveri districts respectively. Starting from the extreme south and working along the Western border, we find first the Nizam's Dominions, separated from the Sironcha and Mul tahsils of the Chanda district by a water boundary consisting of the Godaveri and its tributaries, the Pranhita, and Wardha rivers. Until August of the current year the Sironcha tahsil, owing to its inaccessibility and the cheapness of ganja in Hyderabad territory, was, as already remarked (para. 26), exempted from the direct tax on consumption introduced in 1880-81 : it has now been experimentally brought under the system prevailing elsewhere in the Khalsa proper, information having been received that in consequence of certain fiscal reforms the price of ganja has risen in Hyderabad. The Resident has been addressed with the object of ascertaining the nature of the alleged reforms, and his reply is still awaited.

60. Proceeding northwards we find the Berars marching with the Mul and Warora tahsils of Chanda, all three tahsils of Wardha, the Katol tahsil of Nagpur, the Saosar tahsil of Chhindwara, both tahsils of Betul, and lastly the Burhanpur tahsil of Nimar. The revenue from ganja is raised by (1) levying a license fee of Rs. 10 per acre or part of an acre on cultivation and (2) auctioning the right of retail vend ; but the retail price is nowhere higher than 1 anna per tola, while in the Wun district it is only 3 pies, and elsewhere generally 6 pies. In 1888 the Chief Commissioner authorized the Commissioner of Excise to consult the Commissioner of Berar with regard to the cultivation of ganja in that province and the possibility of checking its carriage across the Central Provinces borders : the Commissioner was accordingly asked to consider the possibility of raising the retail rate to that prevailing in these provinces and imposing an import duty. The objection at first raised against taking action in the direction thus indicated was that it would lead to smuggling into Berar from the Bombay Presidency, where ganja was selling at the rate of Rs. 2 per seer, but subsequently, in pursuance of orders received from the Resident at Hyderabad, a set of draft rules for regulating the import, export, and transport of ganja and for prohibiting its cultivation was prepared. These rules are still under consideration.

In 1880-81 two special peons on Rs. 5 per mensem were entertained, one by Government and the other by Kaluram, the wholesale contractor, for the purpose of detecting smuggling on the western frontier of the Betul district, but they proved a failure, and their services were dispensed with after a few months. The fact is that salaried detectives are of little or no use, as they are liable to be bribed by the very men whom they are paid to watch.

61. The Khandesh Collectorate of the Bombay Presidency succeeds the Berars as conterminous territory, and it is the Burhanpur tahsil of the Nimar district which is on the Central Provinces side of the boundary. Reference has already been made to the extremely low price of ganja throughout the Bombay Presidency: cultivation of the ganja-producing hemp plant is not restricted in any way, though manufacture and sale of the intoxicating drug is required to be covered by licenses, and the revenue, which is under 1½ lakhs, is derived from annual farms of retail monopolies and from permit fees at the rate of Rs. 5 per 10 maunds on imports exports, and transport. Cultivation is largely practised in Khandesh and also in Ahmadnagar and to a less extent in the Broach, Sholapur, Surat, Satara, and Poona Collectorates: ganja is one of the few articles of export of these comparatively poor districts, and it would appear that Government is accordingly unwilling to lay any very heavy tax on trade in the drug.

62. Next to Khandesh comes Indore, in the Sanawad Pargana of which ganja is largely grown. That pargana divides the Kanapur-Beria tract from the rest of the Nimar district, and there is thus a considerable area into which introduction of the untaxed drug is practically inevitable. In 1879 the Commissioner of Excise, with the approval of the Chief Commissioner, suggested to the Agent to the Governor-General in Central India that exports from Holkar territory should be taxed, and only permitted under formal pass; a duty of Rs. 7 per maund was accordingly fixed by the Darbar.

Other States under the Central India Agency which bound the Central Provinces on the north-west are Bhopal and Gwalior; in both of these local transit duties are levied, but they are not sufficiently high to check transport into the neighbouring British districts, *viz.*, Hoshangabad, Narsinghpur, and Saugor. In Gwalior the export duty is, so far as can be ascertained at present, Rs. 2-12-0 per maund: the Maharaja is said to be bound by special agreement to prevent export into British territory.

In the Resolution on the Excise Report for 1889-90, the Chief Commissioner declared his intention of referring for the consideration of the proper authorities the question of limiting or taxing production in the Central India States: the result of the action taken has not been communicated to this office.

63. Damoh is probably the district the revenue of which suffers most from consumption of untaxed ganja. There are villages belonging to the Panna State scattered up and down the Hatta tahsil, and in one village belonging to that State and only a few miles from the head-quarters of the district ganja is freely grown; in all these villages the drug is sold at 10 annas or 12 annas per seer. Complaints have been made to the Darbar from time to time, but without much effect. The injury to our revenue from country liquor as well as to that from ganja which is caused by the existence of these facilities for obtaining a cheap supply of the latter, will be better appreciated when it is remembered that, whereas the *Provincial* percentages of revenue from the two intoxicants to the total excise demand were respectively 60·6 and 8·9 in 1892-93, they were in Damoh 33 and 28·8. There is comparatively little competition for country liquor monopolies, but a fair sum is realized from licensing ganja shops, as illicit ganja can be sold under the licenses without much risk of detection.

Ganja is grown in Rewa, and some is doubtless introduced into the Murwara tahsil of Jubbulpur and into the Dindori tahsil of Mandla.

64. That portion of the border of the Central Provinces which runs from the north-east corner of Mandla to the extreme east of Sambulpur, and then south-west to the point from which we started, divides them from a series of Tributary States and Mahals in Chutia Nagpur and Orissa and from the Jeypore State in the Madras Presidency. For many years past the absence of restriction on the cultivation and sale of ganja in these territories has very materially affected the sales of taxed ganja in Bilaspur and Sambulpur and in the feudatory States on the east. Most trouble was caused by smuggling from Gangpur and Boad, and in 1883 the Commissioner, Chutia Nagpur, and the Superintendent of the Tributary Mahals in Orissa were addressed on the subject. The first mentioned officer thereupon issued parwanas to the Chiefs of Gangpur, Udaipur, Surguja, and Lakhanpur, informing them that they must not allow ganja to be grown by any one without their permission, that they must keep lists of those who grew ganja, and see that no one either grew more than they needed for home use, or sold to others. The Superintendent of the Tributary Mahals, Orissa, however, was unable to do more than request the zemindar of Boad to warn his people that it was an offence punishable by our courts to carry ganja into the Central Provinces. In Chutia Nagpur the action taken by the Commissioner was for some time effective, but by 1888 the special attention of the Chief Commissioner had been drawn to the matter, and the Commissioner of Excise was directed to consult the Commissioner, Chhattisgarh Division,

as to whether a good case could be made out for asking the Government of Bengal to prohibit cultivation in those States, as had been done in the similar Chiefships attached to the Central Provinces. The Commissioner of Excise, having complied with the order, reported that it was clearly expedient to have the cultivation of ganja in the said States prohibited, and the Government of Bengal was addressed accordingly by the local Administration. In reply, it was contended that the Garhjat ganja was much less noxious than that raised in the Central Provinces, was prepared and consumed in a different way, and consequently could not really compete with it.

Local enquiry made with the object of testing the truth of this contention led to the conclusion that the drug which was smuggled into the Sambulpur district from Boad and from Gangpur was ganja proper; differed little from that grown in Nimar; was, like it, smoked, and so far from being less harmful, actually produced more lasting intoxication. The Bengal Government was informed of this result, and it then suggested the levy of a duty on all Garhjat ganja imported into the Central Provinces.

In reporting on the merits of this suggestion, the Commissioner of Excise pointed out that, owing to the wild and unexplored character of the frontier and the portable nature of ganja, smuggling into the Khalsa and feudatory States of the Central Provinces was easy, and could not be checked by the imposition of an import duty, unless the local Administration entertained a preventive establishment, the cost of which would be prohibitive and altogether disproportionate to the results possible of attainment.

The Chief Commissioner, after satisfying himself that the cultivation of ganja had been practically suppressed in the local feudatories, referred to the Government of India the question of suppressing such cultivation in the border States of Madras and Bengal, but was informed in reply that the local Governments did not see their way to adopting the course proposed. The only course now open, so far as the local feudatories are concerned, is to reduce the maximum of 5 tolas which may be legally in possession of any person, and this the Chiefs of Bamra, Rairakhol, and Sonpur have already expressed a desire to do. The Chief Commissioner has recently directed that the question of reducing the said maximum should be taken up for all the feudatory States concerned, and that if a reduction is decided on, it should be uniform for all.

65. The injury caused to the Khalsa revenue by unrestricted cultivation in the feudatory States within the Central Provinces and in the zamindaris the proprietors of which enjoy the privilege of administering excise arrangements themselves has already been noticed. Nothing came of the extension to those estates of the rules made in 1875 (see para. 8) and in 1880 special arrangements were made, which will be found set out in Part 2 of Appendix R to this Memorandum. Each Chief and zamindar was required to take the ganja required for consumption by his people from the wholesale vendor of a given Khalsa district, and it was stipulated that they should prohibit cultivation and issue the drug to their retail vendors at a rate at least equal to that at which issues were made to retail vendors in the neighbouring Khalsa. In the case of Bastar alone no attempt was made to arrange for supplying ganja from the Khalsa: the hemp plant was widely cultivated there, and Government did not deem it expedient to interfere. It was because of their proximity to Bastar that the Kanker State and the Khariar and Bindra-Nawagarh zamindaris were to be supplied at rates more favourable than those fixed for the other States and zamindaris in the Raipur district respectively. These arrangements were fairly successful in Raipur and Bilaspur, but in the Sambulpur States—those under Government management excepted—and in the Chuikhadan State in Raipur, little or nothing was done towards suppression of cultivation.

In 1887, when revision of the tributes paid by the Chiefs and of the settlements with the zamindars was impending, a special enquiry was made as to whether illicit cultivation had been suppressed in the feudatories. It was found that all the Chiefs, except those of Sonpur, Rairakhol, and Chuikhadan, had carried out their undertaking in this respect; a severe warning was conveyed to the Chiefs of those States, and Rs. 3 per seer was clearly laid down for all feudatories as the minimum rate of issues to contractors or consumers.

With regard to Bastar the Commissioner, Chhattisgarh Division, was directed to discuss the question of cultivation there with the Raja himself. The action taken by the Commissioner resulted in unlicensed cultivation being prohibited from 1890 onwards and licenses being granted to a few persons only each year. The object in view was to ascertain precisely who cultivated. Quite recently cultivation was entirely stopped, and ganja is now being supplied by the wholesale vendor of Raipur.

66. It was remarked in para. 52 that more than half of the recent increase in consumption of taxed ganja in the Khalsa proper occurred in the districts of the Chhattisgarh Division, and that it was due in great measure to improved administration in feudatory States. Until the year 1887 each State was under the supervision of a Deputy Commissioner, but in that year a whole-time officer, with the title of Political Agent, Chhattisgarh Feudatories, was appointed. At first his supervision was restricted to six States, *viz.*, Bastar, Kanker, Kalahandi, Patna, Sarangarh and Sonpur; but in 1888 four more, *viz.*, Khairagarh, Nandgaon, Chhuikhadan and Rairakhol, were added. Bamra and Raigarh followed in 1890, and Kawardha and Sakti in 1892, so that all fourteen feudatories are now controlled by the same authority.

The following table shows the amount (in maunds) of ganja issued to feudatory States and zamindaris by wholesale vendors of the Khalsa during each of the past ten years:—

Ganja sold to Feudatories and Zamindars.

	1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.
Raipur	45	72	96	97	80	81	88	93	113	121
Sambulpur	4	13	19	22	12	21	44	53	56	57
Bilaspur	14	17	31	34	32	47	52	46	56	79
Hoshangabad	12	15	16	19	11	22	17	20	5	8
Chhindwara	5	8	9	8	9	11	8	11	11	8
TOTAL ...	80	125	171	180	144	182	209	223	241	273

In 1891-92 there was a considerable decrease in the amount of ganja bought by the Makrai State in Hoshangabad; that State was taken under Government management in December 1890, and 8½ maunds were then in stock. Supplies in previous years had been of *uncleaned* ganja, but for the past two the drug has been supplied in a thoroughly clean state. The Chhindwara statistics do not require any special comment. Those of the Chhattisgarh Division have already formed the subject of some general remarks, and it only remains to note that one reason why more Nimar ganja is now being bought by feudatory Chiefs and zemindars is that greater care is taken to ensure the supply to them of nothing but a good fresh article.

Smuggling.

67. Ganja is not, as a rule, smuggled in large quantities. Unlike opium, it is bulky in proportion to its selling value, and its peculiar and easily recognized odour makes the packing of it difficult, if concealment is desired. Very few cases of large seizures are on record. The most recent one of which this office has information was made in 1892, when 40 seers were found buried in a house in Parseoni, in the Ramtek tahsil of the Nagpur district. Parseoni is said to be a hot-bed of smuggling on a large scale; but, if this is the case, important captures should be more often effected.

The quantity (20 tolas) of foreign bhang which any person may lawfully have in his possession is so large that it can hardly be worth while to smuggle that drug; but for the same reason the amount on which duty is paid must be far short of what is actually consumed. The chief consumers are Marwaris and Hindustanis: the former class travel a great deal, and can easily bring back the maximum quantity of 20 tolas, which is sufficient for 40 doses, whenever they return from visiting places where bhang is manufactured, *e.g.*, Ujjain, Ajmere, and Bahraich. Considerable quantities are introduced by post also.

H. V. DRAKE-BROCKMAN,

Offg. Commissioner of Excise,

Central Provinces.

NAGPUR;

The 11th November 1893.

CENTRAL PROVINCES.

Statistics relating to hemp drugs

Year.	Total population of the provinces.	Cultivation of hemp plant for Ganjah. Area under cultivation. Ganjah.	Charas.	Bhang.	Licenses for cultivation. Ganjah.	Charas.	Bhang.	Amount of imports from other Provinces in Ganjah and Bhang. Of ganjah.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Amount of exports to other provinces in Ganjah and Bhang. Of ganjah.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	Number of licenses for wholesale vend. Of ganjah.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	Number of licenses for retail vend. Of ganjah.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	Amount of duty. On ganjah.	On charas.	On bhang.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
								M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.											Rs. a. p.	Rs.	Rs.
1873-74	81,68,959	1,014	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,133	...	...	...
1874-75	81,68,959	739	...	...	1,020	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,191	...	...	...
1875-76	82,68,959	748	...	...	930	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,207	...	...	...
1876-77	82,68,959	1,139	...	...	951	...	...	203 10	...	...	...	...	...	...	...	...	2	...	...	...	2	1,254	...	...	...	1,254	34,253 10	11	...	...
1877-78	81,68,959	1,819	...	...	951	...	...	321 25	...	...	...	5,020 13	...	...	...	...	...	...	...	...	...	1,124	...	...	...	1,124	30,805 12	5	...	...
												7,066 21	...	...	...	...	...	...	...	...	...	1,200	...	...	...	1,200	42,804 14	10	...	...
1878-79	81,68,959	1,305	...	...	919	...	...	103 0	...	0 32	...	2,274 11	...	...	...	...	...	...	...	...	...	1,206	...	...	...	1,206	41,117 0	3	...	...
1879-80	81,68,959	252	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,223	...	...	...	1,223	39,039 1	6	...	...
1880-81	81,70,015	437	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1,227	...	...	...	1,227	39,424 10	10	...	...
1881-82	82,24,400	79	...	...	...	...	...	...	...	...	...	1,340 13	...	...	...	...	1	...	...	...	1	1,014	...	...	...	1,014	39,344 5	11	...	...
1882-83	82,24,279	935	...	...	200	...	...	...	...	...	...	2,240 29	...	...	...	...	...	...	...	...	22	924	...	14	17	845	31,676 5	2	...	...
1883-84	82,24,279	1,144	...	...	200	...	...	...	...	9 30	...	5,351 5	3	3	...	...	...	...	...	...	22	931	...	16	20	867	49,141 4	9	...	...
1884-85	82,24,279	1,199	...	...	1,377	...	...	...	...	9 30	...	4,789 32	3	3	...	...	...	...	...	...	23	921	...	15	19	895	94,091 8	7	...	...
1885-86	82,24,279	4,170	...	...	1,432	...	...	...	...	...	...	13,980 16	...	...	...	...	...	...	...	...	21	900	...	14	21	902	115,271 11	6	...	...
1886-87	82,24,279	3,214	...	...	910	...	...	...	...	7 8	...	6,052 32	...	...	...	...	...	...	...	...	21	1,028	...	16	21	1,001	90,868 12	5	...	...
1887-88	82,24,279	976	...	...	444	...	...	...	...	7 32	...	4,227 0	...	...	...	...	3	...	...	...	21	1,026	...	18	21	1,065	1,23,246 11	10	...	...
1888-89	82,26,503	943	...	...	391	...	...	...	...	6 0	...	3,052 10	...	...	...	...	...	...	...	...	21	1,001	...	19	22	1,110	1,24,053 12	7	...	...
1889-90	82,24,239	801	...	...	705	...	...	...	...	...	...	7,022 36	...	...	...	...	...	...	...	...	21	1,079	...	19	22	1,114	1,35,749 11	0	...	...
1890-91	82,82,551	831	...	...	806	...	...	18 11	...	...	...	4,107 31	...	...	...	...	21	...	...	...	21	1,091	...	13	24	1,117	1,37,708 12	2	...	...
1891-92	84,35,007	833	...	...	474	...	...	...	...	26 16	...	3,915 33	...	...	...	...	...	...	...	...	18	1,063	...	12	23	1,098	1,36,871 9	0	...	...
1892-93	10,001,023	885	...	...	697	...	...	...	...	10 6	...	4,233 33	...	...	...	...	...	...	...	...	19	1,047	...	12	26	1,099	1,31,340 10	11	...	...

PROVINCES.

for the years 1873-74 to 1892-93.

License fees. On other preparations of the hemp plant.	Amount of Excise duty. Total.	Total revenue. From ganjah.	From charas.	From bhang.	From other preparations of the hemp plant.	Total.	Quantity sold (retail). Of ganjah.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Average rate of consumption, column 43 ÷ column 44.	Population per retail license, column 24 ÷ column 44.	Remarks.
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs.	Rs. a. p.	Rs.	Rs. a. p.	Rs. a. p.	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	M. s.	M. s.	M. s.	M. s.	Rs. a. p.		
...	50,707 12 0	...	...	...	...	...	50,707 12 0	...	...	...	...	...	...	...	...	0 0 1	7,350	
...	56,263 3 1	819 8 0	...	...	...	819 8 0	57,082 10 1	...	...	...	...	...	...	...	...	0 0 1	6,479	
...	54,145 10 11	907 8 5	...	...	...	907 8 5	55,053 3 4	...	...	...	...	...	...	...	...	0 0 1	6,314	
...	59,895 13 5	1,039 4 0	...	...	...	1,039 4 0	60,935 0 5	...	...	...	...	...	...	...	...	0 0 1	7,208	
...	62,894 14 10	6,308 2 9	...	...	...	6,308 2 9	69,203 1 7	...	...	...	...	...	...	...	...	0 0 2	6,772	
...	81,417 0 3	1,727 0 0	...	...	...	1,727 0 0	83,144 0 3	...	...	...	...	...	...	...	...	0 0 2	6,772	
...	59,409 1 6	59,137 14 8	...	...	...	59,137 14 8	59,397 0 2	809 20	...	...	...	...	...	...	...	0 0 2	6,479	
...	38,464 10 10	54,936 1 10	...	...	...	54,936 1 10	93,400 12 8	838 10	...	...	...	...	...	...	...	0 0 2	6,000	
...	29,344 5 11	57,960 2 11	...	...	...	57,960 2 11	87,304 8 10	809 20	...	...	...	...	...	...	...	0 0 2	5,100	
622 1 4	42,366 6 6	47,935 7 10	...	611 7 9	...	48,546 15 7	1,20,911 13 0	...	811 7 9	632 1 4	1,21,056 8 1	889 24	...	19 31	...	0 0 2	10,028	
622 8 0	68,773 13 9	55,003 11 9	...	769 10 0	...	55,673 5 9	1,27,905 0 6	...	769 10 0	632 8 0	1,28,307 2 6	787 12	...	9 20	...	0 0 2	10,451	
854 9 0	90,295 8 7	56,123 5 6	...	921 14 6	...	57,045 4 0	1,30,014 0 1	...	921 14 6	849 8 0	1,30,849 12 7	846 19	...	11 31	...	0 0 2	8,809	
1,152 9 0	1,14,424 5 6	77,767 13 10	...	747 1 0	...	78,514 0 10	1,90,779 11 4	...	747 1 0	1,152 9 0	1,92,679 4 4	1,005 17	...	9 12	...	0 0 2	9,781	
1,509 0 0	1,42,598 14 5	68,475 1 6	...	809 1 0	...	70,232 2 6	1,10,931 14 1	...	809 1 0	1,509 0 0	1,12,691 15 1	893 28	...	10 30	...	0 0 2	9,705	
1,996 14 0	1,24,445 9 10	60,345 9 9	...	826 10 0	...	60,985 3 3	1,80,264 4 1	...	826 10 0	1,996 14 0	1,80,539 12 1	830 34	...	10 20	...	0 0 4	9,605	
951 0 0	1,25,004 13 7	74,190 11 9	...	973 0 2	...	75,163 11 9	1,00,244 7 10	...	972 0 3	951 0 0	2,00,169 8 1	941 12	...	13 6	...	0 0 4	9,771	
976 0 0	1,26,745 11 9	74,696 7 0	...	937 10 6	...	75,674 1 6	1,00,605 3 9	...	937 10 6	976 0 0	2,02,519 13 3	970 33	...	10 19	...	0 0 4	9,260	
838 8 0	1,25,545 7 2	76,204 14 9	...	929 14 0	...	78,014 12 0	1,10,913 15 2	...	929 14 0	838 8 0	2,12,580 3 2	1,019 2	...	10 15	...	0 0 4	9,101	
762 12 0	1,30,057 15 0	66,613 4 1	...	979 14 0	...	68,593 2 1	1,37,488 7 9	...	979 14 0	762 12 0	2,39,231 1 1	1,156 16	...	12 19	...	0 0 5	8,647	
1,078 4 0	1,62,316 3 11	88,620 4 0	...	1,005 13 9	...	89,713 1 9	2,03,270 3 11	...	1,005 13 9	1,078 4 0	2,54,992 2 8	1,104 12	...	13 23	...	0 0 5	8,160	

APPENDIX R.

Present system under which revenue is raised from hemp-drugs.

1.—KHALSA.

(1) Sections of the Excise Act, 1881, relating to hemp-drugs.

Sec. 11.—The Chief Commissioner "may from time to time make such rules to restrict and regulate the cultivation of hemp and the preparation of intoxicating drugs therefrom as he may deem necessary to secure the duty leviable in respect of those drugs."

Sec. 12.—"No.....intoxicating drug shall be sold except under and in accordance with the terms of a license granted under the provisions hereinafter contained.

Provided as follows:

.....(d) Any cultivator of the hemp plant may sell any intoxicating drug prepared from his plants to any person licensed under this Act to sell the same, or to any person authorized to purchase the same by the Collector's order in writing."

Sec. 13.—Subject to rules made by the Chief Commissioner under the Act "the Collector may grant licenses .....for the retail sale.....of intoxicating drugs within his district or any part thereof or at any place therein."

"Licenses for the sale.....of intoxicating drugs wholesale.....shall be granted only by such officer as the local Government from time to time appoints in this behalf."

Sec. 20.—The Chief Commissioner "may from time to time make rules to regulate..... the grant of licenses or passes to persons possessing or transporting intoxicating drugs for the supply of the licensed vendors of such drugs."

Sec. 22.—.....No person shall have in his possession any larger quantity of such drugs than that specified in section 3, clause (k)——[bhang, or any preparation or admixture thereof, one-quarter of a seer; ganja or charas, or any preparation or admixture thereof, five tolas]——unless he is permitted to manufacture or sell the same.

Sec. 55.—The Chief Commissioner may make rules (a) as to the period for which licenses shall be granted, (b) as to the fees payable for licenses, and the times of payment, (c) as to the security to be given by licensees, (d) as to the forms and conditions of licenses, &c.

(2) Gānja.

Cultivation of ganja and disposal of crop.—The cultivation of ganja is restricted to the Khandwa Tahsil of the Nimar district. Harvesting is supervised by a special establishment, and the cultivators are bound to bring the whole of their produce to the Government Store-house at Khandwa. The drug is purchased at the store-house by the wholesale vendors of the province, the terms of purchase being arranged between the cultivators and the wholesale vendors without interference on the part of Government. Wholesale vendors of other parts of British India and foreign dealers are also freely permitted to buy.

No direct tax is imposed on cultivation, but the following fees are payable at the Store-house.

(1) *Storage fees.*—Payable at the rate of 6 pies per mensem by cultivators or purchasers of ganja kept in the store-house. Cultivators and wholesale vendors of ganja in the Central Provinces are exempted from the payment of storage fees for a period of 30 days following the date of their storage or purchase for transport to other districts of the Central Provinces (as the case may be).

(2) *Permit fees.*—Payable by all purchasers of ganja other than Government licensed vendors at Re. 1 per maund of the quantity, permission to purchase which is asked for.

(3) *Registration fees.*—Payable by all purchasers of ganja other than Central Provinces licensed vendors, at Re. 1 per maund of the quantity of which the transfer by sale is registered.

2. *Disposal of wholesale vend contracts.*—Under the rules in force Deputy Commissioners are authorized to grant licenses for wholesale vend, but the practice is for them to report for approval by the Commissioner of Excise the names of the persons to whom and the terms on which they purpose to give the wholesale contracts.

Wholesale vend.

The sole monopoly of wholesale vend is given either for the whole district in lump or for each tahsil separately. If a single contractor is licensed for an entire district, he must keep an agent at each tahsil to sell on his behalf to retail vendors.

Tenders are invited annually in each district by the 1st November: they must state—

(1) what fee per seer, in addition to the direct duty, the applicant is prepared to pay for the monopoly of wholesale vend;

(2) that the applicant is acquainted with and is prepared to comply with all the conditions of the wholesale license;

(3) what security he is prepared to furnish for the due execution of his contract.

The right of refusing the highest or any tender is always reserved and the acceptance of a tender by the Deputy Commissioner is, as noted above, subject to the confirmation of the Commissioner of Excise.

The direct duty is Rs. 2 per seer, except in Sambalpur and the S.-E. part of the Raipur district, where it is Re. 1.

3. *Supply of ganja.*—As soon as the acceptance of a tender for the wholesale ganja contract of any district has been confirmed by the Commissioner of Excise, the Deputy Commissioner, Nimar, is informed of the name of the contractor, the district to which his contract relates and the average annual consumption of ganja in that district. The contractor is then permitted to buy his ganja at the Khandwa store. The purchase by any individual vendor of an unnecessarily large stock, especially towards the close of a year, is reported to the Commissioner of Excise.

When a registered wholesale vendor applies to the moharrir of the store for leave to take out ganja from his stock, the excise darogha, Nimar, or in his absence, the tahsildar of Khandwa or his naib, is at once informed of the fact. The official who receives the intimation proceeds as soon as possible to the store, and with the assistance of a retail vendor or of another wholesale vendor and in the presence of the person whose ganja is to be issued selects from the latter's stock such ganja as seems fresh and of good quality (as compared with the average of the year's supply) up to the quantity which the owner desires to despatch. The selected ganja is then given out for immediate cleaning. All refuse resulting from the process is destroyed.

The moharir and the police guard are responsible that only ganja thus passed for issue by the excise darogha, tahsildar or naib-tahsildar, is cleaned and prepared for despatch. The cleaned ganja is sealed up in hampers, which are weighed and numbered in the presence of the tahsildar or other official appointed by the Deputy Commissioner to supervise weighment and packing: the consignment is then forwarded to its destination under a transport pass, duplicate of which is sent to the tahsildar of the tahsil for which the ganja is intended.

After a consignment of ganja received at the head-quarters of a district or tahsil has been weighed and checked with the invoice, the tahsildar, before placing it in store, examines the quality of the consignment. If any hamper is found to contain ganja which is not fresh or is of bad quality, it is carefully marked and a report of the fact is submitted to the Commissioner of Excise through the Deputy Commissioner. No issues are made from these hampers so long as there is good ganja in stock sufficient for the local demand. Ganja finally set aside is kept until the close of the year, when it is disposed of in accordance with the orders of the Deputy Commissioner, under condition 12 of the wholesale license. Ganja condemned at the Khandwa store-house is disposed of under the orders of the Commissioner of Excise.

4. *Realization of duty and check of wholesale vendor's stock.*—Under the conditions of the license all ganja brought by the wholesale vendor into the district must be covered by a transport pass or by an import license: the ganja so brought is lodged in a store-house belonging to the licensee, one key of which is kept by the tahsildar, and it is issued from time to time to him or his agent by the tahsildar. His stock of ganja is therefore completely under control, and none of it can escape paying the duty leviable on it, such duty being the fee per seer (including the direct duty) which he has agreed to pay.

The wholesale vendor is required to maintain a register of his outside balance and of his sales of ganja. This is examined and compared with a corresponding tahsil register from time to time by the excise darogha, in order to obtain information as to the quantity taken to the several shops.

Ganja is issued once a fortnight. It is well cleaned before being given out, and the stalks and other refuse separated in cleaning are at once destroyed. The quantity so issued constitutes the outside balance of the wholesale vendor for current sale to retail vendors. On each occasion on which a fresh supply of ganja is issued it is the duty of the tahsildar (1) to verify the outside balance by actual weighment, and see whether it corresponds with the balance shown in the wholesale vendor's sale register, (2) to verify the balance under double lock by counting the hampers, and (3) to realize the duty on all ganja sold by the wholesale vendor to retail vendors since the issue of the last fortnightly supply.

Although ganja is cleaned before issue, the mere fingering of it in the process of sale to retail vendors causes a residue of crumbled fragments to form. This residue, or refuse, as it is commonly called, though it is by no means useless, is small in quantity, and is not allowed to accumulate. It can be easily amalgamated with subsequent issues, if not allowed to collect and grow stale by keeping: when it amounts to a seer or upwards it is treated as consumed ganja, and is destroyed by burning, duty being levied as if it had been sold.

At the end of June and December in each year the balance of ganja under double lock is verified by the tahsildar by actual weighment.

When ganja is sent by road, it is escorted by one or more police constables, whose pay while on this duty is recovered from the transporter. Each tahsil must be supplied direct from the Khandwa Central Store, and the amount in stock must never be less than will suffice for two months. Transport passes to cover removal of ganja from one tahsil to another are only granted in cases of urgent necessity. The quantity of ganja produced in the Khandwa tahsil is far in excess of what is required for consumption in the Central Provinces, and there has never hitherto been any necessity for granting an import license.

Retail vend.

5. The number of shops to be licensed in each district is fixed by the Deputy Commissioner subject to the control of the Commissioner of Excise. Ordinarily only as many shops are licensed as are necessary to meet the demands of consumers who, if a licit supply were not obtainable, would probably supply themselves with the drug illicitly. None is established in any place merely for the benefit of one or two occasional ganja smokers. In those districts, however, which are specially exposed to smuggling from foreign States shops are licensed more freely.

The localities of all shops are definitely fixed, sale at other localities being prohibited. The monopoly of retail vend at each locality is auctioned separately, but in large towns the shops are generally sold in lump: temporary bazar shops are generally attached to the nearest permanent shop and sold with it. The general rule is that retail shops are to be auctioned, but with the sanction of the Chief Commissioner shops can be licensed on payment of a fixed yearly or monthly fee.

All retail vendors are entitled to obtain from the wholesale vendor as much good, fresh and well cleaned ganja as they require at Rs. 3 a seer, except in Sambulpur and the south-east part of the Raipur District, where they are supplied at Rs. 2 per seer.

In order that the consumption of ganja at the retail shops may be watched, and that the retail vendors or their servants may be secure from molestation when taking their supplies to their shops, they are furnished with a pass-book in which the wholesale vendor enters up every purchase of ganja made from him.

(3). Foreign bhang.

The comsumption of bhang is not general, being chiefly confined to Marwaris. Every wholesale vendor of ganja is given a license for the retail vend of this drug free of charge. Licenses are not granted to any other persons, and no wholesale vendor may import without a written permit from the Deputy Commissioner. A duty of Rs. 2 per seer is payable on all foreign bhang sold, and the rate of sale to the public must not exceed Rs. 3 per seer.

Stocks of bhang are kept under control in the same way as ganja.

(4). Majum.

Majum is a confection prepared from ganja, ghi, and sugar, and the use of it is for the most part confined to the Holi and Moharam festivals. Shops are sold by auction, and ordinarily the right to make and sell this preparation is restricted to the Holi festival.

(5). Registers and Returns.

A register is kept in the district office of monthly sales and duty receipts in respect of ganja and bhang. The tahsildar is required to submit the necessary information at the end of the month, and obtains it from a similar tahsil register. This information is eventually embodied in the monthly and annual returns submitted to the Commissioner of Excise.

2.—FEUDATORY STATES AND ZAMINDARIS.

Raipur District.—Ganja is supplied to all the feudatories (*a*) except Kanker, at Rs. 2 per seer through the wholesale vendor of the district. Of the price paid, Re. 1 is taken by the wholesale vendor, and the remaining Re. 1 is credited to Government. Kanker is supplied at Re. 1 (*b*) per seer, and the whole of the price paid is taken by the wholesale vendor.

The non-feudatory zamindars generally are supplied at Rs. 3 (*c*) per seer (the rate of supply to licensed vendors in the Khalsa), but Khariar and Bindra Nawagarh are supplied (*d*)

(*a*) From Secretary to Chief Commissioner, No. 2587/123, dated 13th July 1880.
(*b*) „ „ „ „ 3908/204, „ 21st October 1880.
(*c*) „ „ „ „ 2587/123, „ 13th July 1880.
(*d*) „ „ „ „ 597/26, „ 12th February 1883.

at Rs. 2 per seer. All the zamindars make their own arrangements for the retail vend of ganja within their respective estates, and enjoy the revenue from this source.

Bilaspur District.—The feudatories are supplied through the wholesale vendor of the district at 12 (*e*) annas per seer, the whole of which goes to the wholesale vendor.

The non-feudatory zamindars are supplied at Rs. 3 (*f*) per seer, and, as in Raipur, make their own arrangements for the retail vend of ganja, and enjoy the revenue from this source.

Sambalpur District.—Here, as in Bilaspur, all the feudatories are supplied at 12 (*g*) annas per seer, the whole of which is taken by the wholesale vendor of the district.

The non-feudatory zamindars do not enjoy the revenue derivable from the retail vend of ganja, all the arrangements for its retail vend in their estates being made by Government, the revenue resulting from these arrangements also going to Government.

Hoshangabad District.—The feudatory Chief of Makrai is supplied with ganja through the wholesale vendor of the district, at Rs. 12 (*h*) per maund, the whole price going to the vendor.

The retail vendors in the Chater and Pagara Jagirdaris are supplied at Rs. 3 per seer (the rate of supply to Khalsa licensed vendors), of which Rs. 2 (*i*) are put to the credit of the jagirdars, the balance of Re. 1 going to the wholesale vendor. The jagirdars are, therefore, practically supplied with ganja at Re. 1 per seer.

Chhindwara District.—The arrangement (*j*) with the jagirdars of this district is similar to that made with the jagirdars of Chater and Pagara in Hoshangabad.

(*e*) From Secretary to Chief Commissioner, No. 3908/204, dated 21st October 1880.
(*f*) „ „ „ „ 2587/123, „ 13th July 1880.
(*g*) „ „ „ „ 3908/204, „ 21st October 1880.
(*h*) „ „ „ „ 4046/221, „ 3rd November 1881.
(*i*) „ „ „ „ 1531/71, „ 23rd April 1880.
(*j*) „ „ „ „ 2816/245, „ 27th July 1882.

MADRAS MEMORANDUM.

Introductory Remarks.—In September 1871 the attention of His Excellency the Governor-General in Council was drawn to the deleterious effects alleged to be produced by the abuse of ganja and other preparations of the hemp plant, and the opinions of the authorities were invited as to the expediency of restricting the use of the drugs or of even suppressing the cultivation of the plant if such a course should be found necessary. On consideration of the opinions collected, local Governments were directed to discourage, if possible, the consumption of the drugs prepared from the plant by placing restrictions on its cultivation and on the preparation and retail of the drugs. The Madras Government was of opinion that the best way of meeting the wishes of the Government of India would be to pass a law prohibiting the retail sale without license of the drugs, as the Madras Abkari Acts then in force contained no provisions for regulating the traffic in them.

A Bill was accordingly introduced into the local Legislative Council in 1875, but nothing appears to have been done in the matter until the passing of Act I of 1886, in which the provisions and powers in the case of liquor were also made applicable to intoxicating drugs other than opium which had specially been provided for in India Act I of 1878.

2. Even after Act I of 1886 became law, the provisions therein relative to hemp-drugs were not brought into operation, probably because the use of such drugs was then considered not to be particularly prevalent. With a view, however, to bring the traffic under some sort of control, the Commissioner of Salt and Abkari Revenue issued in August 1886 a circular to all Collectors calling for information as to the extent and nature of the trade in these drugs. Amongst other matters inquiry was directed to the following points:—

(*a*) the extent of cultivation of the hemp plant and the purposes for which it was grown;

(*b*) the several descriptions of drugs manufactured therefrom and the processes of such manufacture;

(*c*) the import, export, and transport of such drugs; and

(*d*) the extent of the total consumption of the different preparations from the hemp plant.

3. The general result of the investigation went to show that throughout the greater part of the presidency the traffic in hemp drugs was unimportant, except perhaps in the Northern Circars, where alone they appeared to be used somewhat extensively, the chief consumers of the drug in the presidency being fakirs, byragis, and sojourners from Northern India. The plant was reported to be principally grown in backyards for domestic consumption and not for sale. The areas in which the plant was cultivated on any considerable scale were the Kistna district and the Javadi hills of North Arcot. In South Arcot and Tinnevelly the plant was reared solely for its fibre. Export and import of the drug as defined in the Abkari Act was practically *nil*, the cases met with being only those of transport between districts. As it was deemed necessary to regulate the traffic in a drug which was admittedly baneful to health, the Board, as a preliminary step, made certain proposals calculated to procure accurate information as to the extent of the trade with the least possible interference with it. They were briefly as follows:—

(*a*) to prohibit cultivation except under license to be granted free;

(*b*) to restrict possession by persons other than licensed wholesale and retail dealers;

(*c*) to grant free licenses to wholesale dealers;

(*d*) to put up to auction licenses for retail sale; and

(*e*) to impose a pass duty.

4. In view, however, of the indefinite and uncertain information obtained regarding the extent of the traffic in the drug and the limited nature of the consumption, the Government came to the conclusion that in most parts of the Presidency no restriction was called for, but remarked that it was prepared to extend the provisions of the Abkari Act relating to intoxicating drugs to limited areas on adequate cause being shown.

5. In reporting on certain alterations necessary in the pamphlet on hemp by Dr. Watt referred to the Board for remarks, the opportunity was taken to suggest to Government that the licensing of shops for the sale of ganja on fixed annual fees of Rs. 50 in Madras and Rs. 25 elsewhere might greatly facilitate the collection of accurate information as to the consumption of, and traffic in, the drugs. The recommendation was approved, the license fees being fixed at Rs. 30 and Rs. 15 in Madras and the mofussil respectively, but the Board's subsequent

suggestion to fix 40 tolas as the maximum quantity of the drug that might be possessed without license was negatived by Government, as the extension of the provisions of the Act, contemplated and sanctioned, referred only to the *sale* and *not* to the *possession* and *transport* of the drug.

6. On a representation from the Collector of North Arcot of the difficulty experienced in choosing among a number of rival applicants, and of the large profits earned by shopkeepers, which, without any risk being incurred of pushing the sale of intoxicating drugs, might be diverted to the public exchequer, the remedial measure of enhancing the license fees from Rs. 30 and 15 to Rs. 45 and 30 in Madras and the mofussil respectively was proposed by the Board and approved by Government to take effect from 1st April 1890.

7. Experience, however, showed that the demand for these drugs was considerably larger than was suspected and that the competition in certain districts for the privilege of vend was, in spite of the enhanced license fees, very keen, in consequence of which the difficulty of deciding between the claims of rival applicants was seriously felt. The Board thereupon considered that the already increased rate of license fees might be further enhanced or that the auction sale system might be adopted for ascertaining the true value of shops. As the balance of opinion among Collectors was against the continuance of the fixed license fee system as being entirely inadequate and unsuited to the object in view and as sale by auction was advocated by most of them, the Board recommended the latter proposal and suggested that a minimum retail selling price of 4 pies per tola of ganja might be prescribed as a check against licensees making undue profits by reduction of prices and stimulation of sales. Both these proposals were sanctioned by Government and effect was given to them from 1st April 1891.

8. The sale of intoxicating drugs prepared from the hemp plant having thus been placed on a satisfactory footing, the next question that engaged the Board's attention was whether, having regard to the reported increase in consumption of ganja, it would not be justifiable to impose restrictions also on the transport and possession of the drug. Closely connected with this is the question of controlling the cultivation of the hemp plant. The majority of the Collectors were for prescribing the limit of 10 or 15 tolas of ganja for possession without license, but the Board, agreeing with small minority that restrictions on the cultivation of the plant should precede those on possession, foresaw that any attempt at controlling hemp cultivation would involve the taking out of a license by every person who had a plant or two in his garden. The large undesirable increase to the existing number of shops which would have had to be sanctioned to meet the legitimate demands of consumers under the altered circumstances, as also the considerable additions which would have had to be made to the preventive force were also in the Board's opinion considerations which far outweighed any advantages which the proposed measure was expected to effect. The Board, therefore, came to the conclusion that such a regulation was neither desirable nor necessary, and the question of extending the provision of the Abkari Act to the cultivation of the plant and possession and transport of drugs prepared therefrom was accordingly deferred.

The above is a *résumé* of the correspondence that has passed between the Board of Revenue and the Madras Government on the subject of ganja administration in the Presidency.

9. *Administration.*—The ganja administration of the Presidency is under the direct control of the Collectors of Land Revenue, subject to the central controlling authority of the Commissioner of Salt and Abkari Revenue, who is a member of the local Board of Revenue. In addition to Collectors, the Commissioner is assisted in carrying out the provisions of the law relating to ganja by the officers of the Abkari Department.

The administration is regulated by the Madras Abkari Act and the rules and notifications framed thereunder. The portion of the Act relating to the *sale* of intoxicating drugs was extended to the whole of the Madras Presidency except the scheduled districts on 1st April 1889 and subsequently to 122 Agency villages in Ganjam, 4 in Vizagapatam, and 24 in Godavari. There are no diverse systems of administration in the several districts of the presidency. In those portions of the Agency tracts to which the provisions of the Madras Abkari Act have not been extended, no revenue is raised on hemp-drugs, and the cultivation of the plant and traffic in the drugs are left uncontrolled.

10. *The cultivation of the hemp plant (Cannabis sativa* or *Indica).*—The plant is cultivated in most districts only in back yards of houses and gardens for domestic use. In the following districts it is reported to be more extensively grown. In Ganjam, though the plant is not cultivated extensively in the district proper, the Khonds of the malarious tracts of the Goomsur maliahs cultivate it on a large scale for smoking and for barter in the low country in exchange for other commodities. The estimated outturn of ganja in the district in 1889-90 was about 1,720 maunds. In Kistna it is cultivated chiefly in the Bapatla and Bezwada taluks, the total area under hemp being about 342 acres with a yield of about 3,450 maunds in 1889. In North Arcot district the cultivation of the plant, which was very considerable in 1887—100 acres on the Javadi hills—diminished to about 55 acres with a yield of 1,620 maunds of ganja in 1889. In the Tinnevelly district the *Cannabis sativa* is grown in a few gardens, but apparently to no appreciable extent, the hemp plant largely cultivated in the district being *Crotalaria juncea*, noted for its fibre. In Cuddapah and South Arcot the *Cannabis sativa* is cultivated only to a slight extent, in the latter principally for fibre, the area under cultivation being 5 and 30 acres respectively.

Nothing is known of the extent to which wild hemp is found in the presidency, nor of its use for preparation of bhang or other narcotics.

The average yield of ganja from the best description of plant is 4½ visses or 22½ seers of 24 tolas. The ordinary plant is not, however, so prolific as this, and the average yield may be set down at 2 visses or 10 seers of 24 tolas.

As remarked in paragraph 8 *supra*, the cultivation of the hemp plant is unrestricted throughout the presidency.

11. *Intoxicating drugs prepared from the hemp plant.*—The drugs usually manufactured in this presidency from the plant are of three main descriptions—

(1) Ganja.
(2) Bhang.
(3) Majum.

Other preparations from the hemp plant, such as poornadhi laghium, ramarasam bhoja, sabja, mathai, sakkarai, billai, and alwah are more or less local synonyms of one or other of the above 3 preparations.

Ganja, bhang, and majum are prepared in various ways, the chief only of which will be noticed below:—

Ganja is a preparation of the dried flowers of the female hemp plant, usually reduced to powder in the palm of the hand by being rubbed with the thumb of the other hand. It is generally mixed with tobacco and smoked in a "chilam" or "hooka."

Bhang is prepared from the dried leaves of the male hemp plant and is usually taken as a beverage after being ground into a paste and then dissolved in some liquid, milk or water, with spices, pepper, ginger, &c.

Majum is a confection made of ganja boiled in milk and then mixed with ghee and sugar.

Charas, the resinous exudation from the stems, leaves, and flowers, is used but very rarely in this presidency.

12. *Other preparations of intoxicating drugs.*—In Ganjam and Bellary, a drink called *mathath* is prepared by mixing hemp flowers with opium. *Mathana-kamaswaram* and *poonath* are medicinal preparations made from the leaves of the plant rendered palatable by the admixture of sugar, spices, ghee, milk, &c. The former is reported to be in use in Ganjam and the latter in Tinnevelly.

The manufacture of intoxicating drugs is not forbidden in any part of the presidency, nor is it subject to any rules or restrictions.

13. *Import, export, and transport.*—Enquiries made since 1886 tend to show that there is very little or no export or import as defined in the Madras Abkari Act, but merely transport between districts. The only provinces or States from which intoxicating drugs are imported are Hyderabad, Bastar, and Banganapalle; exports are made to Ceylon, Mysore, Hyderabad, and Cochin territory. Transport between districts within the presidency is not uncommon. The above information cannot, in the absence of trustworthy statistics, be regarded as reliable. *No pass duty* is levied on import, export, or transport of these drugs, and without some such check there is no means of obtaining reliable information about the traffic in the drugs. There is no recognized class of importers.

14. Vague complaints of smuggling from the Ganjam district to the adjoining district of Pooree, as also from the feudatory States of the Madras Presidency into the Central Provinces, were received from the Commissioner of Excise, Orissa, and the Chief Commissioner, Central Provinces, respectively. But on inquiry it was found that the smuggling complained of by the Orissa authorities was not from this presidency. As regards the alleged smuggling from the feudatory States its very existence was not seriously asserted in the complaint and special action was not considered necessary, as the smuggling, if any such existed, was considered of too trifling a nature to render any preventive measures with the consequent expense justifiable.

15. *Sale.*—The sale of intoxicating drugs is, as already pointed out in the introductory remarks, subject to restrictions and placed under control, only those who are licensed vendors being allowed to carry on sales. An exception is, however, made in case of cultivators who are allowed to sell their produce wholesale to persons to whom the privilege of vend has been granted (section 15 of Act I of 1886). Prior to 1st April 1891 and subsequent to 1889 licenses for sale were issued on payment of fixed fees, but this system having been found to entail considerable difficulty and loss of time on Collectors in the choice of applicants and to be unduly advantageous to licensees, it was superseded by the present system of auction sales with the former license fees* as upset prices. In Madras town shopkeepers have also to take out a license on payment of Re. 1 from the Commissioner of Police under Act III of 1888 merely with a view to ensuring good conduct and orderly behaviour in the shops.

* Rs. 45 in Madras and Rs. 30 elsewhere.

16. *Exception of medicated articles.*—Under section 71 of the Madras Abkari Act, the provisions of the Act do not apply to the *sale inter alia* of *bonâ fide* medicated articles for medicinal purposes by medical practitioners, in which term are included native hakims. No abuse of the privilege has as yet been brought to notice.

17. *Shops.*—Information regarding the number of shops licensed each year from 1889-90 is embodied in the accompanying statement. In fixing the number of shops the Board is chiefly guided by the demand for the drug in the presidency, no more shops being licensed than are absolutely necessary. The question of area and population is considered only as bearing on the probable consumption. No considerations of pushing sales or raising revenue are allowed to operate in fixing the number. The number of shops is first determined by Collectors subject to the Board's approval and no increase to the prescribed number can be sanctioned by them without the special orders of the Board obtained in each case.

18. The sites of shops are as far as possible kept at a distance from market places, bathing ghats, schools, hospitals, places of worship and public resort, and factories. It has also been directed that in cases of alterations in the number or sites of shops in the municipalities a list of the proposed shops with their sites should be forwarded to the Council in sufficient time to admit of its remarks being received and considered; and though in the rural tracts the location of shops is at the discretion of Revenue officers, representations from District or Taluk Boards or Taluk Unions would invariably be received with attention.

19. In licensing shops care is taken to see that the traffic does not drift into the hands of opium contractors and that the grant does not lead to a monopoly in favour of particular individuals. Persons belonging to the same family were also precluded from holding interests in intoxicating drugs within the same district. But when the fixed license-fee system was replaced by the system of auction sales, the restrictions on the grant of licenses to the members of the same family, or such as would have the effect of creating a monopoly in favour of particular individuals, were done away, free competition rendering them no longer necessary. Arrack and toddy renters are, like opium contractors, disqualified from bidding at auction sales.

It may here be observed that in this presidency there is no distinction between wholesale and retail shops, no limit being placed on the quantity that can be sold by licensed vendors of drugs.

20. *Consumption.*—In July 1889 an attempt was made to ascertain the quantity of each kind of intoxicating drug prepared from the hemp plant sold during a period of four months from 1st April 1889, but as the information called for related to a period when the rules regarding the sale of ganja and other intoxicating drugs were but imperfectly known to the people in general, and as it was doubted whether in the majority of shops anything like intelligible accounts were maintained, it was considered by the Board that no definite conclusions could be drawn from the statistics collected as to the extent of consumption in the presidency.

21. The enclosed statement shows the consumption of ganja, bhang, and other intoxicating drugs prepared from the hemp plant during 1892-93. In the existing state of the law, which restricts sale, but not the manufacture, possession, or transport of these drugs, it is unsafe to draw definite conclusions as to consumption. Moreover, the figures given in the statement are entirely based on information furnished by shopkeepers, which is far from reliable in the absence of a definite form of account prescribed for their use. Steps have accordingly been taken in the current year for the supply of the necessary account books to licensed vendors, and Collectors have also been requested to furnish separate figures for sales under the different descriptions of drugs during 1892-93.

22. *Prices.*—Accurate information regarding the prevalent retail prices of the different preparations from the hemp plant is not available at present, but has been called for. A minimum retail selling price of 4 pies per tola has, however, been in force since April 1891.

23. *Revenue.*—No direct duty is imposed on the drug. The only source of revenue is the disposal of the privilege of vend. In 1889-90 and 1890-91 it was collected in the shape of fixed fees from licensed shopkeepers, and from 1st April 1891, when the auction system was introduced, it has been realized by the auction sales of shops.

24. The accompanying statement shows the revenue derived from ganja for the last four years. The increase in 1890-91 was due to the enhancement of license fees in the year, Rs. 30 in the mofussil and Rs. 45 in Madras, against Rs. 15 and Rs. 30 respectively in 1889-90. In 1891-92, the first year of the auction sale system, there was an enormous increase, brought about by reckless bids at the sales owing to ignorance of the true value of shops under the former system. The decrease in 1892-93 is but the natural reaction after the unduly high bids of the previous year.

APPENDIX.

Statistics relating to hemp drugs in the Madras Presidency for the years 1889-90 to 1892-93.

Year.	Total population according to the census of 1891.	Cultivation of hemp plant for narcotics. Area under cultivation. Ganja.	Charas.	Bhang.	Licence for cultivation. Ganja.	Charas.	Bhang.	Amount of imports from other provinces in maunds and seers. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Amount of exports to other provinces in maunds and seers. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Number of licenses for wholesale vend. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	Number of licenses for retail vend. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
		Acs.																							
1889-90																									384
1890-91																									273
1891-92	35,656,081	*307	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	200
1892-93																									240

Year.	Amount of licence fees. On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	Total.	Amount of bond duty. On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	Total.	Total revenue. From ganja.	From charas.	From bhang.	From other preparations of the hemp plant.	Total.	Quantity sold (retail.) Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Revenue per head of population column 41 ÷ column 2.	Population per retail license column 2 ÷ column 26.	Remarks.
1	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
		Rs.	Rs.	Rs.	Rs.							Rs.	Rs.	Rs.	Rs.				Seers.	Pie.		
1889-90					4,800										4,800					·00	125,400	
1890-91					6,805										6,805					·05	130,462	
1891-92	...	...	...	...	54,080	...	...	...	...	...	...	...	...	...	54,080	...	...	...		·2	130,065	
1892-93					47,392										47,392				66,868	·2	144,781	

* Information for other districts and for other years is not available.

No further information and no information prior to 1889-90 are available.

BOMBAY MEMORANDUM.

The system of administration in force in the Bombay Presidency in respect of intoxicating drugs is practically uniform in the mofussil and the town and island of Bombay, but as there are some minor points of detail as to management in the latter, which it is well should be set forth, I append the clear and succinct report of the Collector of Land Revenue, Customs and Opium to explain those.

2. The chief points on which information is required by the Commission are mentioned—

(*a*) in the Note attached to the letter from the Secretary, Hemp Drugs Commission, No. 29, dated 11th August 1893—*vide* Government Resolution in the Revenue Department, No. 6123, dated 23rd idem; and

(*b*) in the series of questions appended to the letter from the Secretary, No. 34, dated 12th August 1893, furnished with Government Resolution in the Revenue Department, No. 6161, dated 24th idem.

The questions in Chapters I, III, and V are in great measure amplifications of the points noted for report under head (*a*). Those in Chapter VI will presumably be considered and answered by medical and police experts, while those in Chapter VII relate to the administration, taxation, and control of intoxicating drugs.

3. With reference to the points mentioned in the Note, the first thing necessary, as mentioned in Chapter I, is to distinguish between ganja, bhang, and charas. In the mofussil districts of this presidency there is so little cultivation of the hemp plant, and, comparatively speaking, so small a consumption of the intoxicating drugs prepared therefrom, that but slight attention has been given to the difference between the three. As stated, however, in paragraph 65 of the Abkari Administration Report for 1879-80, "ganja is the flower of the hemp plant and bhang the dried leaves of the same plant," while "charas is the juice." What is recognized as "bhang" in some of the districts consists of the leaves reduced to powder. Charas is practically unknown and unused in the mofussil, and but sparsely in Bombay town. As a rule, therefore, ganja, bhang, and preparations therefrom have heretofore been treated, so far as revenue licenses for import, export, &c., and consumption are concerned, as one and the same thing for statistical purposes. One of the fullest and most interesting reports which I have received is that of Rao Bahadur Rudragauda C. Artal, District Deputy Collector of Bijapur, extracts paragraphs 2—14 of which are appended. It gives a clear account—

(*a*) of the cultivation of the plant,

(*b*) of the various preparations made from ganja.

(*c*) of the purposes for which they are used and the classes of people who use them;

and it forms a valuable contribution to the literature of a subject concerning which but little has hitherto been ascertained in this presidency.

4. Before further discussing the various matters touched upon, I must express regret that it is impossible to obtain the statistics required by the Commission for a period of twenty years—

1*st*, because the administration of this particular branch of revenue has been under control for only thirteen years,

2*nd*, because statistics of the kind required have not heretofore been prescribed, and,

3*rd*, because many of the papers which would have given information have, under standing orders, not been preserved, and during the term of years from 1880 there have been many different farmers in the various districts whose accounts have passed away with their terms of office. Such statistics as are available are supplied in separate tables, but, for the reasons given above, they are not so full or so accurate as is desirable. The plain fact is that in this presidency ganja and the preparations made therefrom have not attracted very much attention either as a source of revenue, or, owing to the comparatively small consumption, as a cause of crime, or as affecting materially the moral or physical well-being of any but a very small proportion of the community.

5. The system of administration is uniform for the whole presidency, the Commissioner of Abkari is the central controlling authority, while in each district it is administered by the Collector and his subordinates in the Revenue and Abkari Departments under the provisions

of the Abkari Act, V of 1878, and the rules published in accordance with sections 27 and 30 thereof under Government Notification in the Revenue Department, No. 4421, dated 23rd August 1880. That notification with the forms attached of which a copy is appended, gives in a complete and intelligible form the whole *system* of the administration of revenue from intoxicating drugs. It supplies almost completely answers to points (*a*) and (*c*) to (*f*) in the Note, and such further information as I can give will be supplementary and on matters of detail.

6. Regarding point (*b*) the information I have received from the various Collectors shows that wild hemp is not found anywhere in the presidency; as a consequence it is not used for the preparation of bhang or other narcotics, and it is therefore unnecessary to control the possession or sale of such drug.

7. *Point* (*c*).—The cultivation of hemp is not prohibited by law in any district, though in such districts as produce it there is a certain restriction in that the cultivator has to obtain a permit, for which, however, no fee is required to enable him to dispose of his produce. His cultivation is noted and watched by the village officers, and he cannot dispose of his crop without obtaining the necessary permit. Form B.—The districts in which hemp is grown are Khandesh, Ahmednagar, Satara, Poona, Nasik, and Sholapur in the Deccan, Bijapur in the Southern Maratha Country, and Broach and Surat in Gujarat. The cultivation, however, is on a very limited scale, as will be seen from the following table, which shows the average area under cultivation for past years so far as figures are available:—

Khandesh	... ...	30 acres.	5 years.
Ahmednagar	... ...	600 „	10 „
Satara	... ...	335 „	13 „
Poona	... ...	16 „	10 „
Nasik	... ...	20 to 25 „	10 „
Sholapur	... ...	38 „	10 „
Bijapur	... ...	3 acres 27 gunthas	5 „
Broach	... ...	29 „	10 „
Surat	... ...	16 „ 30 „	10 „

The information under this head can be regarded only as approximately accurate, as papers relating to cultivation have not been uniformly preserved, and in several instances, *e.g.*, Satara, the term of thirteen years is broken by an interval of five, previous to 1890-91. From ganja being cultivated almost entirely in districts where the rainfall is from moderate to scanty, it may be inferred that in those where the fall is heavy, such as the Konkan and Kanara, conditions for its growth are unfavourable.

8. *Point* (*c*).—The only importers of ganja and other hemp drugs are the licensed retail vendors, *i.e.*, the farmers or contractors for each district or in a few cases each taluka or shop; the arrangements for import, transport, and export are stated in paragraph 3 of the notification mentioned above, and this information may be supplemented by stating that a permit has to be obtained from the Collector, Assistant Collector, or Mamlatdar, according as the drug is to be imported from outside the district, taken from one taluka to another, or from one village to another in the same taluka. When the bhang or ganja arrives it is compared with the pass by the Mamlatdar in the first two cases and by the patil in the third. The retail vendor may store the drug in his own store-room, but the Mamlatdar and Abkari officers go from time to time, and compare the quantities in store with the accounts.

9. *Point* (*e*).—The nature of the control exercised over wholesale vendors, *i.e.*, the cultivators of hemp, and retail vendors, *i.e.*, the contractors and their servants, and the system of licensing them have been explained above, and are further shown in the Government notification mentioned in my 5th paragraph.

10. So, too, as regards point (*f*). The direct tax is the levy of duty on import, transport, and export, the rates of which are specified in the notification aforesaid, *viz.*, Rs. 5 for amounts not exceeding 10 Indian maunds; Re. 1 for every additional 2 Indian maunds or fraction thereof. The indirect tax is the sum paid by the contractor for the right to sell the drug, and that of course varies according to the sums bid in each district. No tax is levied from the wholesale vendors, the cultivators of the plant, and without legislation prohibiting the growth of the plant, I do not think that any tax could be levied, inasmuch as they pay the revenue assessment on their lands. As regards evasion by the farmers or retail sellers, they cannot possibly evade the indirect tax, because until they pay two instalments of the amounts they have bid, they cannot start their business, and if they were to fail in any of their instalments, their licenses to sell would be withdrawn. As to the direct tax, it is equally difficult for them to evade that, seeing the bulky nature of the article, the necessity for getting passes, and the series of examinations to which the consignments and the passes are subject. They have also to keep accounts, which are examined and compared with their stocks from time to time by various Government officers.

11. With reference to point (*g*), I may say that the retail shops are usually fixed by the Collector of the district with regard to the area and population of the locality and the demand

for the drug, and it will be gathered from what has been said above that the farm for the whole district being as a rule disposed of to a single vendor, the single shops are not sold by auction. In a few districts, however, the practice has been to sell single shops by auction, an upset price being fixed, but that practice has been stopped, and for the future the farm for the whole district will be sold to a single contractor. There is no fixed rule as to "local option." In some districts it is attended to carefully, in others the Collector uses his discretion according to the information he possesses as to the demand, but in all, any representation by the inhabitants for or against the establishment of a shop would have full consideration. Such representations, however, have seldom been made.

12. *Point (h)*.—No rate is fixed for the sale of the drug by the wholesale to the retail vendors. That is matter of arrangement between the cultivator who sells his crop and the contractor who buys it. This may perhaps be a suitable place to describe the process of cultivation and manufacture of the plant, and in describing what takes place in Nasik, it will be seen on reading the report of Mr. R. C. Artal, mentioned in paragraph 3 above, that it closely corresponds to the description given thereof in a district so far removed from it as Bijapur. The seed is sown in July or August in black soil land, which is manured. Before sowing the land is ploughed once and harrowed, and during growth the plants are watered and weeded three or four times. Some plants, which apparently are males, seed when they are about a foot high. These have at once to be pulled up, or the whole crop would be rendered useless. Experts are required to distinguish between the male and female plants. The crop is ripe in November-December, and the leaves and flowers are then cut and placed by women on clean threshing floors, where, for 4 or 5 days in succession, they are carefully trodden flat by men, women not being strong or heavy enough for the work, after which process they are packed and ready for sale by the cultivator to the retail vendor. It is very difficult to say accurately what is the average retail price for consumers, as it varies considerably in the different districts, and even in talukas of the same district according to the supply of and demand for the drug. But the following statement compiled from the reports I have received gives such information as is available :—

		Rs. A. P.	
Ahmedabad	Ganja	1 2 0	per lb.
	Bhang	0 6 0	„
Thana	Ganja	0 1 0	per tola.
Kaira	Ganja	1 0 0	per lb.
	Bhang	0 4 0	„
Surat	Ganja	1 0 0	per seer of 37 tolas.
	Bhang	0 6 0	„ „ „
Panch Mahals	Ganja	1 10 0	„ of 80 „
	Bhang	0 10 8	„ „ „ „
Broach	Ganja	1 2 0	„ 37 „
	Bhang	0 5 0	„ „ „
Nasik	Ganja	2 0 0	„ 80 „
	Bhang	2 0 0	„ „ „
Poona	Ganja	1 8 0	per lb.
	Bhang	1 8 0	„
Ahmednagar	Ganja	0 12 0	„
Sholapur	Ganja, Bhang	1 0 0 to 1 4 0	„
Khandesh	Ganja Ujjaini Bhang	2 8 0	„
	Local „	1 4 0	„
Satara	Ganja	0 3 0	„
Bijapur	One *paisa* equivalent weight of ganja or bhang.		
Dharwar	Ganja, Bhang	1 0 0	„
Belgaum	Ganja, Bhang	1 4 0 to 1 8 0	per seer of 80 tolas.

From the above it will be observed that local ganja varies from Re. 0-3-0 to Rs. 2-8-0 per lb., that bhang is considerably cheaper, but that in Khandesh local ganja runs as high as Rs. 2-8-0 per lb., the same price as bhang imported from Ujjain, and that even the locally made bhang is dearer there than ganja in most other districts.

13. *Point* (*i*).—The maximum quantity fixed for retail sale to and possession by one person, consumer, is 40 tolas, throughout the province, and no minimum price is fixed for the drug. That is a matter which is left to the natural law of supply and demand, and few complaints have been made regarding excessive prices. Such complaints have not infrequently been made about the price of country spirit and toddy, and the absence thereof with reference to hemp-drugs indicates not only that there is no dissatisfaction on this score, but that there is, as a rule, so small a demand for these drugs that the general public are indifferent in the matter.

14. *Point* (*j*).—The reports I have received from all districts are unanimous in saying that smuggling of these drugs is to all intents and purposes unknown. Illicit cultivation, sale, and possession may also be said not to exist. There is no reason why there should be illicit cultivation, and the crop itself is not a popular one with the cultivator as is shown by the areas under cultivation. The Collector of Khandesh reports that the area so cropped is declining and the reason is not far to seek. As the Collector of Surat puts it—"now that the sale and transport have been brought under control, only wholesale sale is allowed, and that to the licensed farmers. As ganja and bhang soon deteriorate if kept, the result is that no one grows the plant unless he has a previous contract with a purchaser. The area under the plant is confined to two or three villages, and does not extend to more than 15 to 20 acres. It is said to have been much diminished since the arrangements of 1880." The general measures taken to prevent smuggling and illicit cultivation have been indicated in previous paragraphs, *i.e.*, the growing crops are known and watched; the cultivator cannot sell his crop save under permit and to specified persons; the Revenue, Abkari, and Police officers are entitled to examine consignments and passes for import, transport, and export; the article itself is so comparatively bulky that it could not easily escape detection by one or other of the establishments; and finally there is no such great demand for it, or so heavy duty imposed thereon, as to induce people to run the risk of detection in illicit practices.

15. *Point* (*k*).—I am not aware of any modifications of the present system in respect to hemp-drugs being under consideration. I cannot see that any are urgently called for. The total revenue is small, mainly because the demand for these drugs is small, and it is easily collected. No hardship is caused either to the wholesale seller, the cultivator of the crop, the retail seller, or the consumer. No hindrance is put in the way of legitimately supplying what is an undoubted want of certain classes, no encouragement is given for excessive production, and no inducement is held out to smugglers or others to indulge in illicit practices to meet the demand for the drug. So far as this presidency is concerned, the system which was devised 13 years ago has been successful in every way as I have endeavoured to show above.

As to *Point* (*l*) I have in the previous paragraphs shown the extent of cultivation, and in some measure the sources of retail supply. The latter I may recapitulate as (*a*) the crop grown in the districts mentioned in paragraph 7 so far as it is available, and (*b*) the imports from the Central Provinces, small quantities from Palanpur and from Amritsar and Hoshiarpur in Northern India. The other details called for, so far as I am able to give them, will be found in the appended statement (5), under which I have entered explanatory remarks to prevent misconception of certain of the figures.

17. Turning now to the list of questions under head (*b*) of my 2nd paragraph, I may note that I have answered many of them in the course of this paper, and I propose therefore to refer briefly to a few only of those in Chapter V and those in Chapter VII.

Questions 23—28.—I do not gather from the information before me that bhang is smoked either in the mofussil or in Bombay City, and it appears to me, with deference, that the replies to Questions 24, 26, 28 must in the absence of a careful census be conjectural and untrustworthy. This applies also in great measure to Question 25, and although the figures of revenue from intoxicating drugs may show an apparent increase, they have to be taken with caution, as the census of 1891 shows a considerable increase of population from 1881 and the percentage of ganja consumers as ascertained from the revenue is a very doubtful factor on which to base increase or decrease. The answer to Question 31 is also purely a matter of opinion, and personal experience, either of drug consumers themselves or of those closely associated with them is necessary to answer it.

Question 32.—An interesting and curious religious custom prevails in part of Gujarat Kaira, and probably Ahmedabad, where there are many Nagar Brahmans, which is thus described by Mr. B. E. Modi, the District Deputy Collector of Kaira: "On the Shivaratri day (the last day but one of the month of Maha), sacred to the god Mahadev or Shankar, bhang water is freely poured over the 'lingam.' Mahadev is an ascetic, and is fond of bhang, and on this day it is considered a religious duty to offer him his favourite drink. From this day until the 11th day of Ashad, on which day gods go to sleep, water is kept constantly

dripping upon the 'lingam' of Mahadev from an earthen pot kept over it." Mr. Campbell, in paragraph 9 of his report, also alludes to the special consumption of bhang at the Shivaratri festival. The information that I have received from all districts in the presidency shows that moderate consumption of bhang mixed with water, milk, sugar, and spices into a cooling drink during the hot weather is a common practice amongst the fairly well-to-do classes, both of Hindus and Musalmans, and that (Question 33) it is not regarded as otherwise than respectable, it being a not unusual form of refreshment to offer to guests.

Questions 34—36.—I have every reason to believe that it would be a serious privation to consumers to forego the use of the drug to which they are accustomed. Mr. Campbell has referred to this in his report, and he is confirmed by every Collector who has written on the subject. Ascetics, both Hindu and Musalman, are amongst the chief consumers; they have considerable influence amongst large bodies of the lower classes, who on visiting them from time to time themselves partake either of ganja or bhang without, so far as I can gather, suffering injury therefrom. If the ascetics were deprived of what they regard as a solace from many of the ills that flesh is heir to, they would scarcely refrain from expressing their sentiments very freely, and impressing their own opinions on their visitors. It would of course be possible to forbid and prevent in great measure the use of any of the drugs, but I have no doubt whatever that serious discontent, which might easily amount to political danger, would be caused by such prohibition, and by interference with the customs of men who are universally regarded, by the uneducated classes at least, as specially holy. It is not improbable that prohibition of the use of these drugs would stimulate the consumption of alcohol and opium, although I do not think there is any cause to believe that alcohol is taking their place at present. There is no reason why it should.

18. With regard to the questions in Chapter VII, I have already said above in paragraph 15 that I consider the present system to be working well, and have given reasons for that opinion. It may be capable of improvement, but I am unable to offer any suggestions in that direction either as regards the cultivation and preparation of the hemp plant, its control of the present system of wholesale and retail vend, export, transport, import, or taxation. Nor does it seem to me necessary that there should be different rates of taxation for different kinds of ganja. The whole trade is too trivial to bear minute detailed taxation, so far as this presidency is concerned. Such taxation would cause harassing interference and vexation, and would result in no corresponding benefit either to the public or to the Government revenues. There are not, so far as I can ascertain, houses or shops licensed in this presidency for the sale of these drugs or their preparations, where they may be consumed on the premises, and in my opinion the grant of such licenses would be most objectionable.

T. D. MACKENZIE,

Commissioner of Customs, Salt, Opium, and Abkari.

Extract paragraphs 2 to 14 from the letter No. 562, dated 30th August 1893, from the District Deputy Collector of Bijapur.

"2. The hemp plant known as ganja is only grown in the town of Bijapur and nowhere else in the talukas under my charge. It is a domesticated plant, and does not grow wild here, and, as far as I know, nowhere in the Southern Maratha Country.

Mode of Cultivation.

"3. It is grown generally as an irrigated crop, either in red or loamy soil well manured. The land is tilled once or twice, and then it is ploughed with a heavy hoe called 'ukki-kunti' and levelled. It is afterwards sown through a seed drill, the process of sowing resembling in every respect the sowing of ordinary jowari, the space left between the rows of crops being wider. A leveller called 'dindu' is then driven over the sown area with a view to get the seeds covered over with earth. The seeds required are brought from Ahmednagar and Indore in Central India. It is said that the seeds from the latter are of a superior quality than those obtainable from the former place. As a rule the sowing takes place in July or August, and the crops are reaped within about four months from the date of sowing. If the rainfall is not sufficient, then the crop has to be watered once or twice a week. Hand-weeding is mostly resorted to in addition to the use of grubber or yedi-kunti (small hoe) with a view to get rid of the grass or other weeds growing between the rows of crops. By the driving of the yedi-kunti loose surface earth also accumulates at the roots of plants. This process partly serves in keeping up moisture in the earth. When the plants grow to a height of about two feet, the operations of selecting and uprooting the male plants commence, the female plants only, as far as possible, being allowed to remain and grow to maturity. This selection can only be made by an expert called "Párakhi," and if after great care any male or staminate plants escape attention, and are allowed to grow, there is every fear of the entire crop being damaged. The female plants are said to be so sensitive that if, perchance, male ones are allowed to grow even altogether in a separate plot of ground situated in a windward position

to the crops, almost all the female plants run into seeds, damaging the crops to a great extent. I am informed that separate plots of grounds were selected for growing the seeds. The experts always walk through the crops, up-rooting the male plants, and this continues up to the time the crop is harvested and gathered. The owner of the ganja farm here has secured the services of an expert from Lengri, a village in the Khanapur Taluka of the Satara district, where the drug is grown on a large scale. Here the plants grow to a height of about 6 to 8 feet. In the fourth month the side pods and the leaves are stripped off with hands, and the crown pods are cut with a knife or a scythe. The pods and the leaves thus collected are stacked in a place, and are trodden while in green state for three or four days, and when dried they are winnowed and the pods are thus separated from the leaves; this latter stuff is called bhang-powder. The experts say that it is impossible to select the seeds which produce male plants. The plant is grown in this part of the country as a narcotic drug and not as a fibre plant.

"4. The farm at Bijapur produced about 60 bags of ganja, each containing four maunds (a maund is equal to 960 tolas), worth about Rs. 180 in 1891. In the following year (1892) the yield was about four hundred maunds, worth about Rs. 800 after deducting the necessary expenses incurred in raising the crop, &c. The area sown was about 13 acres.

"5. The purposes for which the drug and its by-products are used.

Ganja.

"Almost all the quantity of pods known as ganja is used up in smoking. Three to eight pods are smoked mixed with ordinary tobacco. The process of preparing the drug for the purpose of smoking consists in soaking the pods in cold water for a few minutes; they are then separated from the little stalks, and the seeds, if there be any, are thrown away. The pods thus soaked and cleaned are rubbed on the palm of the left hand with the right thumb for about a quarter of an hour, a small quantity of cold water being poured on it at short intervals and squeezed out. This rubbing is continued until the stuff gets sticky, and when this condition is obtained it is mixed with ordinary tobacco and smoked. The intoxicating property of the drug increases with the length of the time spent in rubbing it. The drug is also smoked as a medicine to check indigestion, especially in out-of-the-way places where medical aid is not available. It is largely used by the following classes of people:—

(1) Hindu ascetics such as bairágis, gosávis, and mendicants and Mahomedan fakirs and mendicants as a class;

(2) and to a great extent weavers, drummers, fiddlers, the gavayyis (singers), and to some extent day-labourers and also a very low class of prostitutes.

"6. It is administered mixed in sugar by professional thieves to travellers, &c., with a view to make them insensible and then rob them of their property. The drugged sugar is prepared as follows:—

Ganja is mixed with *madan-masta, madan-kamsi,* and the seeds of black *dhatura* trees (all medicinal plants). All these ingredients are reduced to fine powder. A tola weight of this powder is mixed up in a *kacha* seer of sugar, and then administered as Dev-prasad. This sort of use of the drug, as far as I know, is resorted to at big fairs by professional thieves, though now on a very small scale, in this part of the country; but the extent to which it was administered with impunity by a Mahomedan and his companions some years ago in the Belgaum district can be seen by a reference to the confessions recorded by the Superintendent of the Operations for the suppression of the Thugee and Dacoity Department, and printed at pages 49 to 67 of the book called 'Selections from the Records of Government in the Police Branch of the Judicial Department, No. I of 1853, Old Series.'

"7. Charas is one of the by-products of the hemp plant. It is the exudation of the flowers, leaves, young twigs, and barks of the stems. It is a resinous substance which accumulates itself on the palms of hands and fingers when stripping off the pods and leaves, and is scraped off and made into small balls. This narcotic is produced on a very small scale in this part of the country, and is smoked mixed up with ordinary tobacco. It is said that this stuff is more intoxicating than ganja, and being costly is rarely used.

"8. The uses of bhang as an intoxicating drink:—

Ghota.

"This drink is prepared as follows:—Some quantity of bhang powder is slightly parched in the first instance, and is then carefully washed to remove impurities from it. It is then ground on a stone mixed with water. The stuff thus prepared is strained. The liquid is then mixed with the powder of black-pepper, poppy, and anise-seeds and other spices according to the taste and means of the drinkers. Jaggery or sugar and milk are also added to the preparation, and it is drunk both by the rich and poor as a cool beverage, especially during the hot season. This drink is not considered injurious to health. The *fakirs* and mendicants have special liking for this beverage.

Boja.

"9. This is one of the intoxicating preparations in which bhang powder has to be used. It is prepared as follows:—Ordinary jowari flour is soaked in water for a night, which is boiled the next morning, and the kosht-kolanjan (the roots of *Costus Arabicus*), kuchla (*Nux vomica*), and bhang powder are then mixed in it. Some mix the powder of the roots of aconite with a view to increase the strength of the drink. The mixture thus prepared is then spread on a mat and allowed to dry in the shade. This stuff is called 'kanya.' A second preparation, called mávyáche peith, is next prepared. Best sort of jowári is soaked in water for 11 days until the grain germinates. The jowari is then dried in the sun and ground into fine flour. The two stuffs, *viz.*, kanya and mávyáche peith, when proportionately mixed up, produce a fluid substance like nuchhu, the common staple food of all classes of people in this part of the country. This fluid substance is then stored up in a big earthen vessel called ránjan and allowed to ferment therein. A small quantity of this preparation is mixed with water, which is strained and drunk. No sugar or jaggery is used in preparing this drink. It produces a strong intoxication to such an extent that the customers seldom leave the premises of shops, but lie down there quietly until the intoxication subsides. The drink has a very sour smell, and is used only during the hot season. It is sold in common earthen pots called 'moghas.' I am further informed that the contractors, with a view to make good profits out of their farm, buy deteriorated or rotten jowári for preparing the stuff called 'kanya.' Boja farm has not been sold in the district, nor do I hear of any people of any class resorting to this drink.

"10. Majun, commonly called 'majum,' is another preparation of bhang and is prepared in small cakes. Its preparation is as follows:—Ghi is allowed to boil in water for three days and is then mixed with bhang powder and boiled. When boiling it a second time, some quantity of ghi is added to the preparation, and while it is lukewarm, spices, such as cardamoms, saffron, dried ginger, sugar or jággery, &c., are put in. The stuff thus prepared is then poured in a tray, and when cooled is cut into small cakes. It is used by both Hindus and Mahomedans, who are generally addicted to the vice. It is given occasionally to the sick as a sleeping draught, especially in small villages where medical aid is not available. Some use it as a nervine tonic.

Fakki.

"11. This preparation is in the form of a powder and is prepared as follows:—Bhang powder is carefully washed in the first instance. A very small quantity of ghi is put in it and is slightly parched on a frying pan. The stuff is then reduced to fine powder, which is mixed with poppy-seeds and sugar. It is used chiefly by Mahomedans and other people who are given up to the vice.

"12. Bhang powder is also given, especially to plough cattle, as a tonic or preventive against inclement weather in the Mallad part of the country (*i.e.*, districts situated close to the Sayhadri ranges). In a like manner it is also given in various forms to horses.

The use of the seed.

"13. Oil is extracted from the ganja seeds just as that from the safflower and other oil seeds. Generally the oil is used for burning lamps, but when fresh it is also used, however very rarely, for culinary purposes.

"14. Chutney is also made from the seeds. For this purpose the seeds are slightly parched and mixed with chilly, salt, and other spices. The several ingredients are then well pounded and used as chutney with bread. It has a good taste. The seeds form one of the ingredients in native tonic medicines prepared by native doctors."

No. $\frac{A}{426}$, dated the 1st September 1893.

From—J. M. CAMPBELL, Esq., C.I.E., Collector of Land Revenue, Customs, and Opium, Bombay,

To—The HON'BLE T. D. MACKENZIE, Commissioner of Customs, Salt, Opium, and Abkari.

With reference to your letter No. 3741, dated the 21st July last, I have the honour to report that the preparations of hemp known as ganja, bhang, and charas are consumed in the town and island of Bombay.

2. The hemp plant from which these drugs are obtained is not cultivated in the island of Bombay. Ganja is procured from the Deccan, chiefly from Ahmednagar, Nasik, and Satara; bhang from Surat and Palanpur in North Gujarat; and charas from Amritsar and Hoshiarpur in Northern India.

3. As the hemp plant is not grown in Bombay, I trust I am right in thinking that any account of the cultivation or process of manufacture, would be out of place in the present report.

4. Except a few women of loose character, the consumption of hemp-drugs is confined in Bombay to the male portions of the Hindu and Mahomedan communities. Ganja and charas are smoked with tobacco in the ordinary pipes or chilams; bhang and garda, the droppings of ganja, are drunk mixed with various spices; and the sweetmeats, májum, yákuti, and gulkand, whose intoxicating qualities are due to the presence of bhang or garda, are eaten. The preparation and sale of bálagolis, or children's pills, made with ganja instead of with opium, is now prohibited.

5. Ganja is smoked by Mahomedans of the working class, by *fakirs* or Mahomedan beggars, and by Hindu *sadhus* or ascetics, and labourers. Charas is smoked by Pathans, *fakirs*, *sadhus*, and people from Northern India. Bhang and garda are drunk by Mahomedans, and among Hindus by Brahmans, Banias, Bhatias, and other classes to whom their caste rules forbid the use of spirits. The sweetmeats májum, yákuti, and gulkand are eaten chiefly by Hindus from Northern India. Garda is at times given to buffaloes and bhang to horses as a tonic. Except with the limitations of high caste and ascetic, bhang can hardly in Bombay be correctly described as the poor man's narcotic.

6. From the fairly trustworthy figures given in the statement marked A* it will be seen that about 345 Indian maunds of ganja and garda, about 48½ Indian maunds of bhang, about 7 Indian maunds of charas, and 29½ Indian maunds of májum, yákuti, and gulkand are consumed annually in this collectorate. For the total male population of Hindus and Musalmans this would give an average yearly consumption per head of 2·50 tolas of ganja and garda, ·35 tolas of bhang, ·05 tolas of charas, and ·21 tolas of májum, yákuti, and gulkand. It is to be remembered that habitual indulgence in these drugs is confined to a comparatively small number of persons, and that the very great majority of Hindus and Mahomedans either never use the drugs at all or only occasionally consume bhang and garda in the form of a drink.

7. The number of persons who habitually consume hemp-drugs in the island of Bombay is estimated at nearly 3,000. 2,000 of this number are put down as ganja smokers, 400 as bhang drinkers, 300 as garda drinkers, 100 as charas smokers, and 25 as daily consumers of májum, yákuti, or gulkand. According to this estimate habitual consumers amount to 0·36 per cent. of the total population of the island and to ·68 per cent. of the total males of the Hindu and Mahomedan communities.

8. The occasional or moderate use of hemp-drugs is believed not to be physically harmful. The immoderate use of these drugs gives rise to affections of the lungs, bowels, eye, and brain. The smoking of ganja, still more the smoking of charas, is considered the most baneful, and the drinking of bhang and garda the least harmful form in which hemp is used. Hemp-drugs are described as at once stimulating and sedative. They are said to have an exhilarating effect, to excite the imagination, to freshen the appetite, and to act as an aphrodisiac; excessive indulgence in their use leads to indigestion, wasting, dropsy, impotence, melancholia, and in extreme cases, chiefly of charas and ganja smoking, even to insanity.

9. I see little reason to doubt that the prohibition or even the stringent restriction of the use of hemp-drugs would be resented by the people as an unjustifiable interference with their social customs, and would give rise to discontent. Ascetics, both Hindu and Mahomedan, use the drugs largely, and these men are regarded with veneration by, and have influence over considerable sections of the people. Though the inveterate or excessive use of these drugs is held discreditable, the occasional observance of the practice is not open to censure. The use of bhang is closely connected with the worship of the god Shiva or Mahadev. On Maha Shivratri, the great night of Shiva in February, on the Mondays of August-September or *Shravan*, and at the spring festival of Shimga, the drinking of bhang, if not a binding, is an approved and usual practice.

10. If the use of hemp-drugs was prohibited, I think it pretty certain that many habitual and some occasional consumers would be driven to the use either of spirits or of opium.

11. In the town and island of Bombay the right to sell hemp-drugs is put to public auction by the Collector, and with the sanction of the Commissioner of Customs, Salt, Opium, and Abkari, is sold to the highest approved bidder. Notice that the right is to be put to public auction is given by advertisement in the *Bombay Government Gazette* and in some of the local newspapers. Printed slips are also circulated for the information of the Collectors of most of the districts in the presidency. The right is usually sold for a term of three years. A copy of the conditions under which the farm was last sold is forwarded, marked B.*

12. A license under the Bombay Abkari Act (Act V of 1878) is granted to the farmer, a copy of which is forwarded, marked C.* The main heads of the license are:—

(1) That the farmer shall pay monthly in advance $\frac{1}{12}$th of the annual sum for which he has bought the right.

(2) That all risks of loss shall be borne by the farmer, and that he shall pay regularly all sums due.

* Not printed.

(3) That he shall keep shops only at places sanctioned by the Collector; that he will keep his shops open during authorized hours; and that he will open a new shop when required by the Collector.

(4) That he will make his own arrangements for obtaining supplies of drugs, purchasing from licensed persons only, and obtaining the necessary permits for the import or transport of the drugs. That he will keep such minimum stocks of drugs in his shops as the Collector may direct.

(5) That he will not sell drugs of bad quality likely to be obnoxious to the health of consumers. That he will not keep or sell balagolis or children's pills.

(6) That any stocks of drugs remaining on hand on the expiry of the license shall become the property of Government.

(7) That the farmer will keep and sell drugs at sanctioned shops only.

(8) That he will furnish the Collector with the names of his servants, and give them service certificates or *nokarnámas* (blank form, marked D,* herewith forwarded) countersigned by the Collector, with the clauses of the license relating to the keeping of shops attached, and that he will dismiss any servant when required by the Collector.

(9) That he will not sell more than 40 tolas of drugs to any one person on the same day.

(10) That he will not receive any articles in barter for drugs.

(11) That he will not open his shops before sunrise, and that he will close them at 11 P.M. That he will close his shops when ordered to do so by the Collector or Police Commissioner, and of his own accord during a disturbance or riot

(12) That he will prevent gaming and disorderly conduct in his shops, and will not allow notoriously bad characters to frequent them. That he will give information of suspected characters to a Magistrate or to the police.

(13) That he will fix signboards at his shops.

(14) That he will keep at his shops accounts of the receipts and sales of drugs, and produce these accounts whenever required; that he will furnish all returns and information required by the Collector.

(15) That he shall use such weights and measures as the Collector may prescribe, and have them tested and stamped at his own expense at the Collector's office.

(16) That he will not admit partners into his business without the permission of the Collector in writing.

(17) That his license may be recalled for default in the punctual payment of duty, or for infringement by himself or by any of his servants of any of the conditions of the license, or for any breach of the Abkari law. If the license is recalled, the Collector may dispose of it or not as he thinks fit, and that the licensee shall continue to be responsible for the instalments of duty. If the right of vend is transferred, the original licensee shall receive credit for payments by the new licensee up to the amount of duty still payable by the original licensee. He shall have no claim to profits made by the transfer.

13. Except that when purchasing in the Bombay Presidency, he must buy from a licensed seller, the farmer makes his own arrangements for obtaining supplies of the drugs. When he wishes to bring the drug to Bombay, the farmer makes a written application to the Collector, when an import or transport permit (forms forwarded marked respectively E* and F*) is granted on payment of the duty sanctioned, *viz.*:

If the quantity of the drug does not exceed 10 Indian maunds	... Rs. 5
For every additional 2 Indian maunds or fraction thereof	... Re. 1

A copy of the permit granted is sent by post to the Collector of the district from which the drug is to be brought.

14. On the arrival of the drugs in Bombay, a Sub-Inspector of the Abkari Department attends at the railway station, checks the weight of the packages, and if found correct, escorts the packages to the farmer's godown. From the godown the farmer sends the drugs to his shops under permits, a copy of which is forwarded, marked G.*

* Not printed.

15. The statement marked H* shows the number of hemp-drug shops open in Bombay during each of the last five revenue years. The shops are shown in two classes:

(*a*) those in which drugs are sold but not consumed on the premises, and

(*b*) those in which drugs are sold and consumed on the premises.

In the greater number of shops under the (*a*) or drug-selling class the business of selling drugs is combined with the sale of tobacco and pán-súpari.

The (*b*) or drug-consuming shops are places used solely for the sale and consumption of hemp-drugs.

16. Before a new shop can be opened, or an old shop be transferred from one place to another, the farmer must obtain the Collector's sanction. No opening of a fresh shop is allowed if the residents in the neighbourhood offer reasonable objections.

17. The Police Commissioner grants the police license required under Bombay Act XLVIII of 1860 for (*b*) or drug-consuming shops on payment of a nominal yearly fee of Re. (1) one. For the opening of a new or the transfer of an old drug-consuming shop the previous approval of the Police Commissioner is also necessary. From the beginning of the current revenue year 72 hemp-drug shops have been open, of which 52 come under class (*a*) or drug-selling and 20 under class (*b*) or drug-consuming.

18. As the sole right of sale within the island belongs to the farmer, no wholesale drug shops occur in Bombay. Under a license granted by the Collector the farmer issues to his nominees *nokarnamas* or service certificates countersigned by the Collector. In these service certificates all the provisions of the license relating to the working of the shops are embodied.

19. The Bombay farmer is not required to sell drugs at any fixed price. The following table shows the present rates at which the farmer sells the different drugs to his nominees and the rates at which his nominees retail them to the public:—

Wholesale and Retail Rates, 1893.

Drug.	Quantity.	Price.		Remarks.
		Wholesale.	Retail.	
		Rs. A. P.	Rs. A. P.	
Ganja	Pound of 40 tolas.	2 8 0 to 3 0 0	3 9 0	
Bhang	Ditto ...	0 12 0	0 14 3	
Charas	Ditto ...	7 8 0	10 0 0	
Garda	Ditto ...	0 4 6 to 0 5 0	0 5 9	
Majum	Ditto ...	0 14 0	1 4 0	

That is, the retail prices show an increase of 15 to 42 per cent. over the wholesale or farmer's prices.

20. In Bombay no limit is set to the number of drug shops the farmer may open with the sanction of the Collector and Police Commissioner. In practice any increase in the number of shops is discouraged. The farmer would find it difficult to obtain sanction to the opening of a new shop, especially to a shop of the drug-consuming class. The shops are located in parts of the town where the drugs are in demand, that is, as a rule, in the most thickly-peopled parts of the town.

21. Except by such special order as is contemplated under section 17 of the Abkari Act the ninth condition of his license prevents the farmer selling to the same person on the same day more than 40 tolas of any hemp-drug. Applications for such special orders are unknown. No case is on record of any one requiring more than 40 tolas of a drug for his own use during a single day. The possession of more than 40 tolas of a drug by one person, except under the authority of a permit, is also illegal.

22. The statement marked I* shows for each of the past five years the quantities of drugs brought into Bombay by the farmer for local sale. In comparing these figures with those

* Not printed.

given in statement A* considerable deductions from the I figures must be made for wastage and loss on account of spoiled drugs. From time to time quantities of these drugs are destroyed under the supervision of Abkari officers as unfit for sale. The quantities reported by the farmer to have been consumed in the island during the last two years are believed to be fairly correct.

23. The statement marked J* shows the total revenue derived from hemp-drugs during each of the past five revenue years. A comparison of the figures given in table J* with those in table I* shows for the five years that the incidence of duty on these drugs, excluding those used in the medicinal preparations, extract *Cannabis Indica*, amounts to Rs. 87·4 the Indian maund, that is, nearly Rs. 2·2 the seer. The largest item of revenue is the license fee. This has steadily increased for each successive term for which the license has been granted. For the present term, starting from 1st August 1893, the annual license fee payable is Rs. 48,000, that is, Rs. 8,500 more than the same fee paid for the previous term of three years.

24. The statement marked K* shows the exports of drugs by sea during the past five years. When drugs arrive by rail for export by sea, the weight of the packages is checked by an Abkari officer at the railway station. If the weight is found correct, the officer escorts the package to the docks or bandar and hands them to the Port Trust or Customs authorities. If the drugs arrive by water for transhipment and export, the Customs authorities supervise and allow the transhipment after the Abkari Department have endorsed on the covering permit that the transhipment is free from objection. The figures under "British Indian Ports" indicate exports to ports in British territory. Those under "Foreign Indian Ports" relate to ports within the limits of Native States.

25. The smuggling of hemp-drugs into Bombay cannot at present be said to prevail to any extent. *Bona fide* travellers may bring into Bombay 10 tolas of drugs from places without the presidency, and any person may bring 40 tolas of drugs into Bombay from a place within the presidency. The Abkari and Opium Departments have special establishments who watch the railway lines for smugglers. The Customs Department guard the sea front of the island. The present Bombay farmer also holds the hemp-drugs farm in the Thana district, and regulates the prices at Bandra, Kurla, and Thana so as to discourage people running out by rail to these places and bringing back with them less than 40 tolas of a drug.

26. The table marked L* shows the admissions to the Colaba Lunatic Asylum during each of the five years ending 1892-93 and the causes of insanity so far as they have been ascertained.

Colaba Lunatic Asylum. Cause of Admission, 1888—1893.

Admissions.	Due to intoxicants.			
	Hemp drugs.	Spirits.	Opium.	Other intoxicants.
774	62	79	8	1
	Percentage on total admissions.			
	8·0	10·2	1·0	0·1

Compared with eight from opium, sixty-two is a heavy total from hemp-drugs. Considering how comparatively few persons use the drug, sixty-two is also large compared with seventy-nine from spirits. Of the sixty-two admissions due to the excessive use of hemp-drugs all but four, two from bhang and two from charas, are ascribed to ganja-smoking. It is perhaps doubtful whether some entered as ganja smokers were not actually charas smokers. In any case the number of smokers of charas is small compared to the drinkers of bhang. It follows, and this agrees with all other received information, that the drinking of bhang is comparatively a harmless practice.

27. The import, export, transport, manufacture, sale, and possession of intoxicating drugs other than opium are regulated by the Bombay Abkari Act, No. V of 1878, and the rules and notifications published under that Act. Subject to the control and direction of the Commissioner of Customs, Salt, Opium, and Abkari, the Collector of Land Revenue, Customs, and Opium is charged with the collection of abkari revenue, and with the carrying out of the provisions of the Abkari Act in Bombay. In addition to its other abkari duties the Collector's abkari establishment is engaged in preventing the smuggling of hemp-drugs and their illicit sale within the island. Under the orders of the Collector, the Abkari officers also see that the farmer

* Not printed.

of intoxicating drugs pays punctually the sums due by him and that his shops are conducted in accordance with his license conditions. They check shop accounts, and exercise a general supervision and control over all matters relating to the possession and sale of hemp-drugs.

28. In conclusion I would beg to state that in this report I have endeavoured to include replies to the questions in the note attached to Government Resolution, Revenue Department, No. 6123, dated the 23rd August. Further report will, as early as possible, be submitted in connection with the schedule received with the said Government Resolution.

BOX

BAY.

Statistics relating to hemp-drugs for

the years from 1873-74 to 1892-93.

Year.	Total population.	Cultivation of hemp plant for narcotics.						Amount of imports from other Provinces in Madras and Sind.				Amount of exports to other provinces in Madras and Sind.				Number of licenses for wholesale vend.				Number of licenses for retail vend.				Average per head of population, column 2.	Population per retail license, column 2.	Remarks.
		Area under cultivation.			Licenses for cultivation.																			
		Ganja.	Charas.	Bhang.	Ganja.	Charas.	Bhang.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
		A. G.		A. G.				Mds. s.	Mds. s.	Mds. s.	Mds. s.	Mds. s.	Mds. s.	Mds. s.	Mds. s.									Rs.		
1873-74 ...	14,037,543	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	233	...	...	0	60,254	
1874-75 ...	14,037,543	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	233	...	...	0	60,254	
1875-76 ...	14,037,543	540	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	...	...	...	0	30,127	
1876-77 ...	14,037,543	880	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15	...	...	...	0	24,102	
1877-78 ...	14,037,543	598	16	...	...	...	...	47	0	...	...	...	...	...	...	...	...	...	...	17	230	...	1	0	22,125	
1878-79 ...	14,037,543	1,012	13	...	...	...	...	47	0	...	...	...	...	...	...	...	...	...	...	14	201	...	...	0	26,967	
1879-80 ...	14,037,543	695	26	...	...	...	...	47	0	...	...	...	...	...	...	...	...	...	...	15	...	...	...	0	24,169	
1880-81 ...	14,037,543	402	20	...	...	...	...	47	0	...	...	...	...	...	...	...	...	...	...	13	216	...	...	0	26,972	
1881-82 ...	14,037,543	1,700	2	...	...	...	...	47	0	...	...	...	...	...	...	...	...	...	...	9	224	...	...	0	24,838	
1882-83 ...	14,100,861	1,700	2	...	...	...	...	691	9	6	22	64	30	...	3,200	20	11	32	2	16	...	...	...	0	29,787	
1883-84 ...	14,100,861	962	28	...	...	...	...	464	23	1	17	...	...	...	4,304	0	2	0	...	...	...	...	...	0	29,787	
1884-85 ...	14,100,861	813	14	...	0	24	...	675	0	15	0	52	0	...	2,573	0	0	1	7	15	...	...	...	0	29,787	
1885-86 ...	14,100,861	921	20	...	3	0	...	...	...	...	...	...	...	...	...	1,384	9	...	...	0	20	...	...	0	29,787	
1886-87 ...	14,100,861	1,121	30	...	0	12	...	...	...	...	...	1,691	20	5	0	1	32	...	...	21	231	...	...	0	29,787	
1887-88 ...	14,100,861	872	30	...	...	...	...	...	...	...	...	4,612	0	...	...	...	...	...	...	30	...	...	...	0	29,787	
1888-89 ...	14,100,861	1,033	0	...	...	...	...	5,496	24	10	0	77	21	...	3,406	21	...	0	3	27	...	...	...	0	29,787	
1889-90 ...	14,100,861	703	2	...	...	...	...	1,522	21	13	0	134	12	...	3,033	0	...	...	...	27	224	...	...	0	29,787	
1890-91 ...	14,100,861	514	22	...	0	20	80	...	1,079	24	13	0	64	2	...	2,126	10	...	...	...	0	64	240	...	0	29,787	
1891-92 ...	14,100,861	952	20	...	...	2	210	...	2,100	22	...	...	94	16	0	20	3,131	22	...	...	...	0	64	240	...	0	29,787
1892-93 ...	14,100,861	1,301	4	...	0	0	1	...	1,711	17	8	0	262	17	0	20	3,979	20	...	...	...	0	64	240	...	0	29,787
1893-94 ...	15,018,100	1,060	32	...	...	...	...	2,123	8	6	0	39	20	...	...	3,845	20	...	...	...	...	...	...	0	30,036	
1894-95 ...	15,018,100	799	0	...	0	20	2	...	1,206	0	0	0	133	21	2	27	6,806	20	...	10	0	5	0	444	0	30,036	

Amount of licence fees.				Amount of fixed duty.				Total revenue.				Quantity sold (issues).				Average per head of population, column 2.	Population per retail license, column 29.	Remarks.
On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	From ganja.	From charas.	From bhang.	From other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.			
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Mds. s.	Mds. s.	Mds. s.	Mds. s.	Pies.		
8,250	...	...	...	8,250	...	...	...	11,482	...	...	...	...	...	...	...	97	40,440	Though columns 26, 31, 36, and 41, each of which is supposed to represent the total of several provincial columns, show the correct totals, it will be seen that if the figures shown in the individual columns of the statement be actually added up, the sums will not tally with the totals shown in the said columns 26, 31, 36, and 41. The reason for the discrepancy is that, as observed in the remarks column of the above-quoted statement appended to Bombay Memorandum, dated 12th September, 1894, details for seven districts are not available separately from the totals.
8,250	...	...	...	8,250	...	...	...	11,732	...	...	...	...	...	...	...	97	43,319	
8,250	...	...	...	8,250	...	...	...	11,805	...	...	...	...	...	...	...	97	43,342	
8,000	...	...	...	8,000	...	...	...	11,094	...	...	...	...	...	...	...	97	43,708	
9,563	...	...	...	9,563	...	...	...	12,221	...	...	...	...	...	...	...	97	38,886	
10,971	...	...	...	10,971	...	...	...	14,035	...	...	...	455	30	0	20	1 03	31	3 10	07	34,839	
...	...	...	...	12,960	...	...	...	3,83	...	...	...	50,993	659	33	...	1 24	28	3 17	07	29,787	
...	...	...	200	16,142	...	...	...	3,411	...	...	200	47,788	1,212	8	...	2 09	14	7 13	07	28,980	
...	...	...	272	27,305	602	9	127	...	819	4,147	20	127	277	33,914	1,194	13	...	1 29	7	5 35	1 0	33,974	
...	...	...	240	26,544	194	10	21	...	229	194	10	21	240	47,262	1,247	6	...	1 29	10	49 31	1 0	34,933	
4,238	...	...	236	91,092	189	13	10	...	2,642	4,304	13	10	236	94,337	1,326	13	...	1 32	4	9 30	1 0	32,860	
4,825	...	...	203	1,00,500	221	...	41	...	3,521	88	...	41	203	1,04,314	1,414	20	...	1 37	12	1 10	1 0	37,403	
6,011	...	...	203	1,01,500	774	2	8	...	4,302	5,795	5	49	201	1,10,407	1,227	14	...	1 33	14	0 0	1 0	36,313	
5,987	...	...	400	1,96,543	669	13	36	...	3,941	6,730	15	36	400	1,33,325	1,093	23	...	2 10	32	10	2 0	39,831	
6,011	...	...	207	1,14,543	371	30	73	...	4,325	5,986	20	73	207	1,16,871	1,765	14	...	1 38	9	27	2 0	38,945	
5,987	...	...	401	1,17,149	287	15	22	...	3,491	5,330	15	22	401	1,20,653	1,630	15	...	1 31	12	26 10	2 0	37,010	
6,987	...	...	400	1,16,041	440	...	28	80	4,370	6,027	...	28	400	1,21,020	1,707	9	...	1 34	12	35 0	2 0	37,705	
4,813	...	...	401	1,26,532	420	5	90	60	4,177	6,233	5	90	370	1,30,700	1,607	20	...	1 24	1	32 19	2 0	39,317	
5,982	...	...	441	1,29,042	424	5	10	70	4,396	6,016	5	10	441	1,33,233	1,753	24	5	30	141	30	87 10	2 0	41,570	
6,984	...	...	441	1,34,501	240	5	20	100	4,032	7,132	5	20	440	1,45,505	1,974	13	0	31	44	20	85 30	2 0	45,578	

SIND MEMORANDUM.

(*a*) There is one uniform system as regards the sale of hemp drugs for the province of Sind. The privilege of retail sale of bhang, ganja, charas, and majum in two or three talukas together, or in a sub-division, or in an entire district, is put up to public auction every year by the Collector in the month of July for the revenue year commencing with the 1st August and ending with 31st July of the following year, and sold generally to the highest bidder. Care is taken that the bidder whose bid is accepted bears a good character, and is able to furnish adequate security for the due performance of the conditions of the farm. Accompaniment A* to this note is the form of license given to the farmer, who is allowed to open a certain number of shops within the limits of his farm. The retailers appointed by him for his shops are first approved by the taluka officials (Mukhtyarkars) and then 'parwanas' (permits to sell) are given to them by the Assistant Collector. The administration of the system is carried on by the Collector and his Assistants and Deputy Collectors, subject to the general control of the Commissioner in Sind. It is based on the Bombay Abkari Act, V of 1878, and the rules framed thereunder by Government and the Commissioner in Sind.

(*b*) The wild hemp plant is not found in the province except near the hills to the west and on the border of Baluchistan. No attempt has been made to control its possession or sale. It is rarely used as an intoxicant, though it is believed that the intoxicating drugs prepared from it are much more potent than those made from the cultivated plant.

(*c*) The hemp plant is grown only in very small quantities and in very few localities in Sind. The largest continuous area of cultivation is in Sehwan taluka of the Karachi district, and the bhang produced therefrom supplies the wants of the larger part of Sind. There is no restriction whatever on the cultivation of bhang, but certain restrictions are imposed after the crop has been reaped, in so far that the cultivator is not allowed to convert the produce into bhang without the permission of the sub-divisional officer, and may not dispose of it by sale to any other than the licensed farmer for the particular area in which his crop is situated. Neither ganja nor charas are produced in Sind, but are imported, the former from Panwel in the Kolaba district and the latter from Amritsar. Bhang is the only preparation made from the hemp plant in Sind. The area under cultivation in the Karachi, Hyderabad, and Shikarpur districts for some years past is shown in the statement B attached to this report.

(*d*) The bhang farmer also buys the right to import charas and ganja; he imports them under permits from the Collector and stores them in his own warehouses and distributes them among his retail shopkeepers. Supervision is provided for under the Bombay Abkari Act in the same manner as that described by the Honourable Mr. Mackenzie in his Note. On the arrival of any consignment of charas or ganja the quantity is tested and compared with the permit under which it has been imported.

(*e*) The cultivator may be considered to be the wholesale dealer, and, as already said, he requires no license; nor does the contractor or farmer require any license beyond the general license which he buys at auction for the right to sell the different hemp drugs. The retail vendors, who are the contractor's servants, procure licenses from the Assistant Collector on the application of the contractor. The stock in hand as well as the accounts of these retail licensees are examined by the sub-divisional officers, by the Mukhtyarkars, Abkari Inspectors, and Police officers.

(*f*) No direct tax on bhang, ganja, and other drugs is levied; the only tax being an indirect tax in the shape of the amount for which the right to retail is purchased by auction, the amount is levied in advance by instalments.

(*g*) The number and localities of the shops are fixed by the Collector with due regard to the requirements of each part of the district and with reference also to area and population. No fees are levied for shops, as all the shops situated in any particular district or sub-division are owned by, and are under the control of the farmer of that district or sub-division, and licenses are granted free to persons named by him. The farmer cannot add to the number of shops when once fixed by the Collector without the sanction of the Collector, nor can he close or alter the locality of any shop without permission. There is nothing in Sind in the nature of 'local option'; but of course any representations for or against the opening of shops in any particular localities by the residents of those localities would influence the Collector's decision. But owing to the very limited consumption in Sind of the hemp products, such representations or interference on the part of the people are practically unknown.

(*h*) No rate is fixed at which bhang, &c., must be supplied by wholesale dealers (*i.e.*, the cultivators) to retail dealers, and the retail price varies in every district.

* Not printed.

The following table shows the average retail price of bhang, ganja, and charas in the four districts, Karachi, Hyderabad, Shikarpur, and Thar and Parkar:—

	Per seer. Bhang.	Per seer. Ganja.	Per seer. Charas.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Karachi	1 0 0	10 0 0	30 0 0
Hyderabad	1 4 0	6 6 6	25 0 0
Shikarpur	1 0 0	9 8 0	15 0 0
Thar and Parkar	1 0 0	10 0 0	30 0 0

(*i*) The amount fixed for retail sales to, or possession by, the consumer is 40 tolas, under Government Resolution No. 4681, dated 14th July 1888. No minimum price is fixed for retail sales of the drug.

(*j*) A certain limited amount of smuggling of bhang takes place from Khairpur State, which is adjacent to the Hyderabad, Shikarpur, and Thar and Parkar districts, and the reason for this is that the hemp plant is cultivated and bhang manufactured and sold without any restriction in Khairpur. There is no doubt, also, that some small amount of charas and ganja is smuggled into Sind from Jesulmir through the Thar and Parkar district. No special measures are taken to prevent this smuggling, as every kind of abkari supervision is entrusted to the salt and opium preventive establishments. As for smuggling in the form of illicit cultivation of hemp or manufacture of bhang there is little chance of such occurring, because cultivation is inspected and noted by no less than three different officers in turn, *viz.*, the Tapadar, Mukhtyarkar, and Assistant Collector, and it is easy to see that such cultivators as obtain permission to manufacture bhang, dispose of it all to the licensed vendor, and do not keep a portion of their produce for private use or illicit sale.

(*k*) No modifications of the present excise system in respect to hemp-drugs are under consideration, nor do any appear necessary. The reasons given in his note by the Commissioner of Customs for deprecating any interference with the present system apply even more forcibly to Sind, where the consumption of the hemp drugs is proportionately smaller than in the presidency, and where, on account of the small number of producers and licensed vendors, no hindrances or hardships have ever been experienced.

(*l*) The extent of cultivation of bhang is shown in the statement marked B attached to this report, and it need only be observed here that the growth of the plant is practically confined to the Karachi and Shikarpur districts. From the figures* of revenue which are at present available only for the Karachi, Hyderabad, and Thar and Parkar districts, it will be seen that during the last 20 years there has been a steady increase of revenue derived, which, seeing that the only item of revenue is the amount paid by the farmers for the right to vend, implies increased competition among bidders, and that again implies an increased demand for the drugs. The amount of revenue derived in the Hyderabad district, after fluctuating and falling considerably, is now very little in excess of what it was 20 years ago.

(*m*) On this point it need only be said that as bhang is used in moderation by Hindus and Mahomedans alike, and as even an excessive use of it is not attended by nearly such serious consequences as an excessive use of alcohol or opium, any measures for modifying the present system, or restricting its free use by the people are likely to cause widespread discontent. Interference, however, with the present system of administration as regards charas and ganja would not be so unpopular on account of the very small extent to which these drugs are used in Sind, and because their use is generally admitted by the people themselves to be harmful.

R. I. CRAWFORD, *Colonel,*

Acting Commissioner in Sind.

* *Note.*—The Shikarpur and Upper Sind Frontier figures have been subsequently received and are included in the statements attached.

Statistics relating to hemp drugs in the

Year.	Total population.	Cultivation of hemp plant for production.				Amount of imports from out of provinces in maunds and seers.				Amount of exports to other provinces in maunds and seers.				Number of licenses for wholesale vend.				Number of licenses for retail vend.				Remarks.
		Area under cultivation.			Licenses for cultivation.																	
		Ganja.	Charas.	Bhang.	Ganja.	Charas.	Bhang.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
				A. G.			M. S. T.	Mds. s.	Mds. s.	Mds. s.	Mds. s.	Mds. s.	Mds. s.	Mds. s.	Mds. s.											
1873-74	2,397,459	...	...	253 39	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1874-75	2,397,459	...	...	184 9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1875-76	2,397,459	...	...	237 28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1876-77	2,397,459	...	...	279 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1877-78	2,397,459	...	...	310 18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1878-79	2,397,459	...	...	315 21	...	...	10 0 0	21 0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1879-80	2,397,459	...	...	97 28	...	...	34 16 0	17 30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1880-81	2,397,459	...	...	325 27	...	...	20 32 0	...	4 0	...	...	41 25	5,410 14	...	...	...	...	...	...	...	...	...	...	...	
1881-82	2,402,048	...	...	425 8	...	...	70 0 0	19 32	...	...	1 16	17 30	...	...	...	...	...	...	...	...	...	...	...	...	
1882-83	2,414,631	...	...	157 23	...	...	...	...	...	...	...	7 30	...	...	...	...	...	...	...	...	...	...	...	...	
1883-84	2,414,631	...	...	216 24	...	...	6 0 0	1 0	40 0	...	21 0	6 2	15 0	...	...	...	...	...	...	...	...	...	...	...	
1884-85	2,414,631	...	...	220 26	...	...	1 20 0	32 14	...	...	1 20	9 15	600 0	...	...	...	...	...	...	...	...	...	...	...	
1885-86	2,414,631	...	...	309 15	...	...	4 20 0	40 1	200 15	...	7 35	4 27	347 0	...	...	...	...	...	...	...	...	...	...	...	
1886-87	2,414,631	...	...	338 23	...	...	...	39 35	80 0	...	...	...	1,000 0	...	...	...	...	...	...	...	...	...	...	...	
1887-88	2,414,631	...	...	143 36	...	...	3 17 0	0	...	...	...	...	1,025 0	...	...	...	...	...	...	...	...	...	...	...	
1888-89	2,414,631	...	...	277 21	...	...	15 0 0	36 1	612 3	...	...	3 17	927 2	...	...	...	...	...	...	...	...	...	...	...	
1889-90	2,414,631	...	...	378 18	...	...	32 0 0	31 35	1,130 20	...	...	...	2,003 12	...	...	...	...	...	...	...	...	...	...	...	
1890-91	2,740,548	...	...	310 6	...	...	16 74 0	42 35	791 16	...	...	1 25	1,414 24	...	...	...	...	...	...	...	...	...	...	...	
1891-92	2,871,774	...	...	146 3	...	...	23 61 10	40 24	820 12	...	2 0	2 0	1,880 10	...	...	...	...	...	...	...	...	...	...	...	
1892-93	2,871,774	...	...	302 18	...	...	47 59 21	41 17	934 15	...	...	...	2,317 6	...	...	...	...	...	...	...	...	...	...	...	

Province of Sind for the years 1873-74 to 1892-93.

Amount of licence fees.				Amount of fixed duty.				Total revenue.				Quantity sold (actual).				Revenue per head of population, columns 2 ÷ 1 = column 47.	Population per retail licence, column 2 ÷ column 46.	Remarks.
On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	From ganja.	From charas.	From bhang.	From other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.			
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
								Rs. A. P.				Rs. A. P.	Mds. S. T.	Mds. S. T.	Mds. S. T.	Mds. S. T.	Rs. A. P.		
...	...	...	...	...	...	...	...	76,681 14 3	...	...	...	76,681 14 3	...	...	...	...	0 0 7	6,404	
...	...	...	...	...	...	...	...	76,644 15 10	...	...	...	76,644 15 10	2 6 00	0 37 00	60 20 0	...	0 0 7	6,099	
...	...	...	...	...	...	...	...	79,196 5 4	...	...	...	79,196 5 4	12 16 40	11 37 5	1,651 10 0	29 23 7	0 0 7	4,801	
...	...	...	...	...	...	...	...	80,503 3 0	...	...	...	80,503 3 0	2 24 0	15 10 0	1,785 11 0	2 21 0	0 0 8	3,969	
...	...	...	...	...	...	...	...	79,329 7 1	...	...	...	79,329 7 0	11 8 30	19 32 73	1,727 36 55	4 0 0	0 0 7	3,797	
...	...	...	...	...	...	...	...	73,905 3 0	...	...	...	73,905 3 0	2 37 0	21 20 0	1,473 13 0	0 3 0	0 0 6	3,044	
...	...	...	...	...	...	...	...	65,301 14 4	...	...	...	65,301 14 4	1 24 0	17 9 0	1,019 8 0	...	0 0 6	4,179	
...	...	...	...	...	...	...	...	75,304 10 6	...	...	...	75,304 10 6	0 33 0	23 16 0	1,200 8 0	0 4 0	0 0 6	4,366	
...	...	...	...	...	...	...	...	84,336 14 0	...	...	...	84,336 14 0	1 21 0	22 23 0	1,497 33 0	0 2 0	0 0 7	3,013	
...	...	...	...	...	...	...	...	87,889 0 0	...	...	...	87,889 0 0	0 13 0	10 5 0	1,327 30 0	0 5 0	0 0 7	4,131	
...	...	...	...	...	...	...	...	90,114 0 0	...	...	...	90,114 0 0	22 30 0	14 30 0	1,544 10 0	0 13 0	0 0 7	4,364	
...	...	...	...	...	...	...	...	1,03,857 0 0	...	...	...	1,03,857 0 0	43 37 0	13 32 0	1,180 20 0	...	0 0 8	4,001	
...	...	...	...	...	...	...	...	99,379 0 0	...	...	...	99,379 0 0	41 7 0	10 8 0	1,654 8 0	...	0 0 8	4,054	
...	...	...	...	...	...	...	...	1,08,200 10 7	...	...	...	1,08,200 10 7	33 5 0	13 29 0	1,603 0 0	0 3 0	0 0 8	4,005	
...	...	...	...	...	...	...	...	1,14,723 2 4	...	...	...	1,14,723 2 4	33 26 0	12 25 0	1,561 15 0	0 6 0	0 0 9	4,143	
...	...	...	...	...	...	...	...	1,23,161 0 0	...	...	...	1,23,161 0 0	48 5 0	29 26 0	4,703 14 0	0 18 40	0 0 8	4,122	
...	...	...	...	...	...	...	...	1,27,544 0 0	...	...	...	1,27,544 0 0	37 31 40	25 24 0	4,703 2 0	0 24 40	0 0 10	4,165	
...	...	...	...	...	...	...	...	1,26,405 0 0	...	...	...	1,26,405 0 0	48 34 23	32 10 0	4,182 12 0	0 16 23	0 0 10	4,616	
...	...	...	...	...	...	...	...	1,41,614 0 0	...	...	...	1,41,614 0 0	51 2 20	40 30 0	4,380 36 0	0 19 33	0 0 5	4,420	
...	...	...	...	...	...	...	...	1,05,310 0 0	...	...	...	1,05,310 0 0	37 32 65	55 35 0	4,368 6 0	0 23 3	0 0 13	4,474	

BERAR MEMORANDUM.

A.

Extent to which the hemp plant is cultivated in Berar.

A statement showing the area under hemp plant during the past 16 years is appended, and from that it will be seen that in Berar there is very little of hemp cultivation. It is only confined to a small tract of the Akola and the Buldana districts in the vicinity of the town of Khamgaon and to some villages in the Morsi Taluk.

In the excise report for 1880-81 Mr. Jones has given a list of villages in which ganja was cultivated in that year, but since then the cultivation has decreased and all the villages mentioned there do not now cultivate ganja.

The list given by Mr. Jones is appended—

Amraoti District.	Malkhed.	All in Morsi.
	Chincholi.	
	Hiwarkhed.	
	Sendurjana.	
	Baleda.	
	Warud.	
	Amrapur.	
	Hiwarkhed.	Akot Taluk.
	Bordi.	
	Malegaon.	
Akola District.	Khamgaon.	Khamgaon Taluk.
	Sutala.	
	Shegaon.	
	Pimprigoti.	
	Kherda.	
	Pimpalgaon.	Jalgaon Taluk.
	Jalgaon.	
	Wadgaon.	
	Yeklore.	
	Rudana.	
	Jangaon.	
	Sutala.	All in Mulkapur.
	Burti.	
	Garandgaon.	
	Paner.	
	Ghat Bori.	
	Khutpuri.	

The manner in which the plant is cultivated for the production of drugs and the method of preparing the manufactured drug from the raw product whether the wild or the domesticated plant.

As already stated, hemp is cultivated in only three districts—Akola, Buldana, and Amraoti. The Deputy Commissioner of Akola describes the manner of cultivation in the following words :—

"For the ganja plant garden land is required; ordinary black soil is apparently too stiff, and an admixture of organic matter is necessary. The soil is twice deeply ploughed and is given as much manure as the cultivator can afford (one tehsildar says 10 cart loads per acre), is then harrowed two or three times before sowing. This is done at the beginning of the rains, at the same time as cotton is sown, and the seed is planted by means of a tiphan or plough drill. It seems to be the practice to mix *ambadi (Hibiscus canabinus)* seeds with the ganja seeds. The young hibiscus plants are pulled up a fortnight after they have come up, and the reason of the practice appears therefore to be to save seed and preserve a sufficient space between the ganja plants. When they are about a foot and a half high, the plants which are unisexual are examined and the male ones (called bhangia) are picked up. If the rains fall favourably, no irrigation is required till about October, when the plants are maturing, when apparently they always require to be watered. In November the plant, which is then 5 feet high, is cut. The small outer branches are stripped off and put in towards the centre of the plant, which is then pressed with the foot (to flatten the heads), made up into sheaves, and stacked in a shed under pressure, the heaps being opened and the sheaves moved now and then to prevent their getting too hot. The leaves fall off when the plants are tied into bundles. They are collected and called bhang. The bare stalks remain with the heads on them.

"The wild plant is not indigenous in Berar. Plants come up near the huts where gosains and other regular consumers live, and if watered and tended, can be used for the preparation of ganja, but are weaker and not so good as the cultivated kind; if not tended, the heads are said to be only fit for smoking like tobacco."

The manner of cultivation described by the Deputy Commissioners of Amraoti and Buldana is similar to the above.

Charas is not known in Berar. The resinous substance of the hemp plant is allowed to dry with it.

The only drugs manufactured in Berar from the hemp plant are "bhang" and "ganja."

Extent to which wild plant can be used for the preparation of drugs, whether in the milder or the more noxious forms.

The rules restricting the ganja cultivation (referred to in a separate memorandum submitted) make it obligatory on the village officials in Berar to destroy any plants of spontaneous growth. Hence wild plants are an impossibility in Berar, and so they are not used for the preparation of drugs.

Full particulars should be obtained regarding all the different forms of the drug which are commonly used, especially ganja, charas, and bhang, and regarding the classes of the people by whom and the extent to which each is used.

The only forms of the drug that are used by the people are ganja and bhang. Charas is not used. Other preparations that are known are these :—

"Majum," "gulkand," and "yakuti."

Ganja chillum.

Ganja (the flowers of the plant or the flattened heads of it) is smoked in the following manner :—

The smoker takes a head of the plant, places it on his left palm, puts over it a little water, and mixes it by the pressure of the right thumb. This process of wetting and pressing is repeated, says the Deputy Commissioner of Akola, 121 times over. Then it is pressed and put into a piece of cloth, and the moisture squeezed out. A small quantity of tobacco is added to enhance its effects, the mixture is then put into a chillum (pipe) and smoked.

Bhang or Thandai (a cooling drink).

Bhang is drunk as a cooling drink in the hot weather. The method of preparing the drink is as below. Bhang—or the flowers and leaves that drop when the plants are being tied up into sheaves—is first of all well cleaned and then boiled. Afterwards it is very carefully washed and then dried. A small quantity of this preparation is then mixed with spices such as "sonph," "miri," "badam," "khaskhas," and "rose-buds." The mixture is then well pounded, putting a little water over it. It is then mixed with cold water or milk, and sugar put in it, and after being filtered it is drunk. This is known as bhang or thandai, or a cooling drink.

Majum.

The method of preparing this drug is described below. A sheave of ganja is first cleaned properly, and after being boiled is carefully washed very clean. It is then mixed with ghee and is again boiled. This

preparation is then filtered, and the fluid essence is mixed with spices such as jaiphal, jaipatri, kalmi, vilaichi, lavang, khurasni wora; sugar is then separately boiled, and when it is found to be quite clean and ready for being mixed with the above preparations, it is so mixed, and the whole thing is once more boiled. This preparation is called majum, which is of a green colour. I have obtained this information from a well known majum-seller at Ballapur, whose preparation is celebrated in the province and it is in many places called by name "Deolai," who was the original owner of the shop. This "Deolal" is used by many people known to be respectable.

There is another preparation similar to the above and is called the gulab shakri majum. It is the same as the above, but is coloured red by mixing a small quantity of hingul.

Gulkand.—Essence of ganja prepared just as it is done for majum and mixed with sugar and rose flowers or seranti flower becomes gulkand.

Yakuti.—Appears only to be another name of majum, but it must necessarily contain rich spices above mentioned. Majum can be made even only by mixing sugar with essence of ganja prepared as above stated.

Bhang.—Besides being drunk in the above mentioned manner a preparation of bhang is eaten. Bhang is first well boiled and washed clean and then dried. It is then pounded without water and is mixed with a powder of lavang, vilaichi, jaiphal, etc., and saffron. A small quantity of this powder is mixed with sugar and eaten by some people.

These are the only forms of the drug commonly used in Berar. Charas is not at all available and is not imported, being considered very costly.

Ganja is smoked chiefly by Kahars, Hamals, Kolees, Tellees, Gossaees, Bairagis, Mahomedans, and people of any caste living a vicious life, such as prostitutes, etc. Any Hindu may smoke it but it is not generally smoked by people of respectability. Ganja smoking is considered to be a social stigma by people of good society.

Bhang is drunk chiefly by Pardeshis from Hindustan and Marwaris. This drug is not considered to be so bad as ganja is. Respectable people sometimes drink it without hesitation. Habitual consumers of this drug, however, are not respected in society.

The quantity of ganja and bhang required for a consumer differs according to the liking of each man. Generally a habitual consumer requires from 6 mashas to two tolas of ganja er day, but amongst Bairagis and some other people we might find men who consume even up to 8 or 10 tolas per day.

The proportion of the population addicted to ganja-smoking is estimated to be about one per cent., but there is no reliable data to come to an approximately correct estimate.

Similarly, no estimate can be formed of the proportion of bhang consumers.

The physical and other effects of the use of hemp drugs.

The Deputy Commissioner of Akola describes the effects of ganja and bhang as below :—

"At first ganja smokers feel strengthened by it, which induces them to ganja smoking, and when it becomes a habit they cannot do without it. Ganja smokers lose strength gradually, cough sets in, their lips become black, and face pale. Excess leads to loss of memory and in some cases to insanity. The bad effects of ganja-smoking are not seen soon if the smoker is well fed. It sometimes improves the health, but these are rare cases."

The Deputy Commissioner of Buldana describes the effect of ganja smoking as below :—

"The eyes of the smokers assume a reddish colour, the lips become darker, constitution lean, weak, and sleepy. Appearance pale, temperament rough in speech and manners and talkative, asthmatic, peevish, quarrelsome, and unmindful of consequences."

He further says :—

"The use of ganja when it is accompanied by a proportionate amount of substantial food is considered to be harmless and conducive to a healthy constitution for a time, but ultimately its natural effects begin to tell on the consumer; he becomes asthmatic and phlegmatic. Ganja consumption is said to be beneficial to persons living in cold countries or at places where water is poisonous."

Bhang.—The Deputy Commissioner of Akola says :—

"This drink is said to aid digestion, to sharpen the appetite. No apparent harm is said to result from the use of bhang except in some cases it leads to rheumatism in the long run."

The other forms of the drug, majum, gulabshakri, gulkand are not habitually consumed. They are only luxuries and are taken at times.

What proportion of the population habitually consume hemp-drugs?
Is the use of hemp drugs a frequent cause of lunacy?

There is no reliable data to form an estimate of the proportion of the population habitually consuming hemp-drugs, but one per cent. can be taken as an approximately correct estimate for Berar. Generally, as above said, this drug is consumed by Fakeers, Bairagis and Sanyasis, etc., who come to the province as wanderers; very few people indigenous to Berar are addicted to the use of these drugs. Instances are known when excessive use of ganja-smoking has led to lunacy, but there is nothing to show that it frequently causes lunacy.

Whether the consumption of hemp drug is either harmless or beneficial. If so, in what form?

Consumption of bhang as a drink is considered to be harmless and even beneficial. Smoking ganja is not considered beneficial.

Administrative arrangement in force in Berar for controlling the growth of the plant, the manufacture and sale of the drug and their importations from other provinces or from Native States, and for imposing duties on cultivation and sale.

Please see memorandum drawn up under instructions received from the Secretary, Hemp Drugs Commission, in his letter No. 28, dated 11th August 1893.

Danger resulting from prohibition or restrictive measures of a stringent character. Would it give rise to serious discontent and be resented by the people as an unjustifiable interference with long-established social customs?

In this respect the Deputy Commissioner of Amraoti says:—

"As has been said above, a very small portion of the entire community is addicted to the use of the drug. Its prohibition in entirety may lead to discontent, but imposition of restrictive measures will not be resented. But serious discontentment would result in Amraoti district if even stringent measures were adopted. Smuggling by Marwaris would increase, as they are generally men of money. Detection would be difficult."

The Deputy Commissioner of Akola says:—

"The smokers of ganja, when compared with the total population, are not a large number, and so if the cultivation is stopped, of course the smokers will suffer for a time and they will show discontent, but it will wear off in course of time: probably the ganja-smokers would be driven to other stimulants."

The Deputy Commissioner, Buldana, says:—

"If the total prohibition of the growth, consumption, or importation, is enforced, it will, no doubt, give rise to serious discontent, but that will prevail only among the consumers of the drug, who are so few in proportion to the total population of the district that the discontent will scarcely be politically felt. However, if it be necessary, restrictive measures even of a stringent character may be introduced, provided that the consumers have sufficient time allowed them to become accustomed to the effect of those measures, so that eventually they will not be felt by them at all."

The consensus of opinion appears to be that no danger will result from prohibition.

Do any customs similar to those in Bengal prevail in Berar, and how far does the use of hemp-drug form a part of social or possibly religious ceremonial or observance?
Would restrictive measures give rise to political discontent among any classes of population?

There are no customs similar to those in Bengal prevailing in Berar. The use of hemp drug does not form part of any social or religious ceremonies or observance. The only exception is the Mahashivratri, when the devotees of Shiva bathe the idol of Shiva by the preparation of bhang, but such devotees are very few in proportion to the population. They do not belong to any particular class of people. Any Hindu who chooses to worship the god Shiva can do this. The festival only comes up once in a year, and the drug is not considered to be an essential material of worship. The god is supposed to be very fond of it, and so the devotees try and acquire it on that day. Restrictive measures would not in Berar give rise to political discontent among any classes of population.

If hemp-drugs are prohibited, is there any possibility or probability of the people addicted to these drugs being driven to have recourse to alcohol or other stimulants or narcotics which may be more deleterious?

The Deputy Commissioners are of opinion that it is likely that if the use of ganja is prohibited altogether, the habitual consumers would be driven to other stimulants or narcotics. In my opinion the non-drinking Hindus who are addicted to the hemp-drugs would not be driven to alcohol necessarily. They have a fear of losing their caste, and so even if they do not get the drugs they would not take to drink. The Deputy Commissioner of Amraoti district in this respect says:—

"The favourite way of taking the drug is made up in a sweetmeat called majum. Mahomedans who by their religion are not allowed the use of alcohol are given to using majum, but now-a-days majum is made cheaper and just as good by using the root of the jawari plant.

So by stopping the use of the drug those who use majum would not suffer. The only people who might be discontented would be mendicants and a few Marwaris, who would console themselves with opium as a substitute, which would be beneficial in comparison to the drug, which is injurious."

No Deputy Commissioners have suggested any improvements desirable. The only thing that was needed has been already effected. From the next year the farm of these drugs will be sold separately from the opium farm.

Any reforms or improvement for controlling the cultivation of the hemp plant and the manufacture, sale and taxation of hemp-drug?

BERAR MEMORANDUM.

B.

The administration of hemp drugs in the Hyderabad Assigned Districts is regulated by the Abkari rules, copies of which have been sent to Secretary, Hemp Drugs Commission. Opium and hemp drugs in the Hyderabad Assigned Districts are treated in one farm, and where opium shops exist, hemp drugs are allowed to be sold.

This farm is worked uniformly throughout all the districts in the Hyderabad Assigned Districts by the Deputy Commissioners through their tahsildars. There are no separate Excise officers to control the vend of drugs. A monopoly of the right to vend is sold by auction each year by the Deputy Commissioners under the orders of the Commissioner, and the highest bidder usually obtains it and is licensed. The opium and hemp drugs farm being sold together, the proceeds are credited to opium and drugs. No information is, therefore, separately available as to the value of hemp drugs, and hence the columns requiring this information in the appended statement C are left blank. It is, however, supposed that the revenue from hemp drugs is about one anna in the rupee, or $\frac{1}{16}$th of the value of the whole farm auctioned. This statement is based on enquiries made of the farmers, and as nothing certain can be obtained, I have omitted these figures from statement C.

The question of separating the sales of hemp drugs from opium has been very recently taken up, and it has been decided to separate them from the 1st April 1894.

I now turn to the points mentioned in the note accompanying letter No. 28, dated 11th August 1893, and take them *seriatim*.

Control of the growth of the hemp plant.

Up to the year 1875 the cultivation of ganja and bhang was not restricted in Berar. Rules regulating and restricting the cultivation of ganja and bhang in the Hyderabad Assigned Districts were first issued* in the year 1874 and were brought into force from the 1st of April 1875. Under these rules the cultivation of ganja and bhang was strictly prohibited except under a license. The Deputy Commissioners were authorized to grant such licenses, and they had to be written on a stamp paper of Rs. 8 (to be supplied by the cultivator) without reference to the area cultivated.

* Notification No. 55, dated 5th August 1874.

Under these rules the village officers were bound to make immediate reports of unlicensed cultivation, and the Deputy Commissioners were authorized to cause the destruction of such crops and plants of spontaneous growth. Cultivators of unlicensed ganja and bhang crops were made liable to a fine not exceeding one hundred rupees for each offence, and half the fines realized were made payable to informants as rewards.

The effect of these rules was that the cultivation of ganja was confined to a very few villages in the Akola, Buldana and the Amraoti districts, the villages in the first two districts being mostly in the vicinity of the town of Khamgaon and those of the Amraoti district in the Morsi taluk of that district. Table A appended to this will show the extent of ganja cultivation in the Hyderabad Assigned Districts between the years 1877-78 to 1892-93, inclusive, and from the figures it will be observed that it has been very limited.

The above rules remained in force without any change till the year 1884, when they were modified by increasing the fee for cultivation from Rs. 8 per license to Rs. 10 per acre or part of an acre cultivated. This had the effect of further curtailing the cultivation of ganja, *vide* figures in Table A. From the year 1885-86 the cultivation has gone down immensely.

At the time these modifications were made the Commissioner made it obligatory on the vendors of ganja and bhang to keep accounts of their receipts and disbursements.

These modifications were originally introduced as a tentative measure, but have since been continued. As it is, the amount of land cultivated is very insignificant: on an average of the past seven years it is about 55 acres per year in the whole province.

The rules of 1875, therefore, with the modifications of 1884, are the rules at present in force, and so far as is known works satisfactorily.

Manufacture or importation and sale of hemp drugs.

As already stated, the farm for manufacture, etc., of hemp drugs is given out with the opium farm, and consequently these drugs are manufactured, imported, and sold by opium vendors only. The manner of manufacturing these drugs is described in the Memorandum A, which is separately submitted.

The local produce is not sufficient for the wants of the province, and therefore ganja is imported usually from Khandwa in the Central Provinces, sometimes from Khandesh in the Bombay Presidency. No duty is levied on importations. On an average it is estimated that about 800 maunds of ganja is annually imported into the Province; this with the ganja locally produced is apparently sufficient for the requirements of the people who indulge in this drug.

There is no means of ascertaining what portion of the population indulges in hemp drugs; therefore any calculations require us to deal with the entire census population or the total of the male and female adult population. The Hyderabad Assigned Districts' total population by last census is 2,897,040; the *adult* population, male and female, is 1,794,174. Now 800 maunds are on the average imported per annum, and about 500 raised locally, which gives a total of 1,300 maunds. If this were *all* consumed, it would mean on the whole population 14 tolas per head: on adults 23 tolas per head per annum. The 500 maunds estimated as on the average to be locally raised is arrived at by assuming that the 55 acres, the average of the past seven years, under hemp gives 10 maunds per acre.

In reality the farmers' returns of consumption (column 42, statement C) are wholly unreliable; therefore I have taken the whole produce raised locally and imported, to calculate the incidence per head of consumption, as a safer guide.

Duties imposed.

No duties are imposed on hemp drugs. The only revenue that is derived from these drugs is the price of the farm combined with opium and the license fee on cultivation.

No fee is levied on the licenses for importation. They are granted free to the licensed vendors.

The above information applies to ganja and bhang. Charas is not used in the province. There is only one kind of ganja in the province, and that is the flat ganja.

(*a*) The system of administration throughout the province is uniform. The central controlling authority is the Deputy Commissioner of the district.

The administration is carried on by the tahsildars with the assistance of the village officers.

The following are Abkari officers under the rules:—

Deputy Commissioners,

Assistant Commissioners,

Tahsildars,

Naib-Tahsildars, and

Police officers of a rank not below that of Inspectors and chief constables in charge of police stations.

(*b*) Wild hemp is not found in the province.

(*c*) As above stated, the cultivation of the hemp plant for the production of ganja or bhang is prohibited except under a license. It is not restricted to any particular locality. It is evident that as the area locally under hemp is small that it is more paying to import the drug than to cultivate it.

(*d*) The opium and drug farmers are the only importers of ganja and bhang. No charas is imported.

All the Abkari officers mentioned above have power to inspect the shops established by the farmers, and to check the actual balance with the entries in the books kept; and if any irregularities are discovered, the farmers are liable to be prosecuted under the Abkari Rules, section 43.

All importers of ganja or bhang are required to take out a pass from the Deputy Commissioner. No arrangements are made for controlling the storing or transport of these drugs.

(*e*) The farmers are the wholesale and retail vendors. Those in the retail trade keep books showing their sales, and they are prohibited from selling more than 20 tolas of ganja and bhang to one person and are forbidden to allow the drug to be smoked on the premises. Their shops are occasionally inspected by Abkari officers to enforce these orders.

(*f*) The only direct or indirect tax on ganja in this province is the money paid by the farmer and the fee paid by the cultivator for a license. The latter is recoverable as arrears of land revenue and cannot possibly be evaded. The former, if not paid, is recoverable under rule 15 of the Abkari Rules by attachment and sale of moveable property of the farmer within the jurisdiction of the Deputy Commissioner. At the time of the sales precautions are taken to ascertain that the farmer's securities are men of substance, and that they possess moveable property sufficient to cover the amount tendered by the farmer for which they go security.

(*g*) Up to the present wherever an opium shop was permitted there hemp drugs could be sold. In future, guided mainly by the requirements of the trade, Deputy Commissioners have fixed hemp drug shops in a few localities ; in all 229 shops will next year be open. This on an area of over 17,000 square miles means one shop to every 74 square miles of country.

There is nothing in the nature of local option ; but if the people of any certain locality object to have a shop in their midst, the Deputy Commissioner, as against the trade, considers their objections.

(*h*) No rate is fixed at which the drug must be supplied by the wholesale to the retail vendor. This is left to private contract. The average retail price to consumers varies from Rs 2 per seer to Rs. 2-4 in the Amraoti District. The Deputy Commissioner of Akola gives the prices in his district as below :—

Ganja	...	...	...	...	6 pies per tola.
Bhang	...	...	...	...	6 pies per 5 tolas.
Majum	...	...	...	...	6 pies per tola.
Gulkand	...	...	...	...	5 annas per pound.

The prices do not vary much in different districts.

(*i*) The maximum amount fixed for retail sales is 20 tolas or quarter of a seer for ganja and bhang and 5 tolas for charas when sold.

There is nothing laid down as to the amount of possession, and no minimum price is fixed on the drug.

(*j*) The smuggling of ganja has seldom been detected. There is no illicit cultivation of ganja ; the inspection of crops raised is too close to admit of this.

(*k*) The only change in the present system is the separation of the farm of hemp drugs from the opium farm.

(*l*) A statement in the prescribed form, marked C, has been prepared and submitted. From it will be seen that there is very little ganja cultivation in the province, and that no ganja or bhang is exported from Berar. The number of shops and the quantity of ganja and bhang imported and sold retail can be seen from this statement. The figures are taken from those in the printed reports. From these figures it will be seen that on an average about 1,300 maunds of ganja and bhang are annually consumed in the province.

The figures in column 9 of statement C are not correct as figures of actual import for the reason given in the column of remarks of that statement. The columns showing the revenue from hemp drugs are left blank, as the information, for reasons already explained, is not obtainable.

(*m*) I can think of nothing further worth mentioning to make the account complete.

Statistics relating to hemp drugs in the Hyderabad

Year.	Total population.	Cultivation of hemp plant for ganjadum.						Amount of imports from other districts or states in Madras and Berar.			Amount of exports to other provinces or states in Madras and Berar.			Number of licenses for wholesale vend.				Number of licenses for retail vend.				Remarks.
		Area under cultivation.		Licenses for cultivation.																		
		Ganja.	Charas.	Bhang.	Ganja.	Charas.	Bhang.	Of ganja.	Of charas.	Of bhang.	Of ganja.	Of charas.	Of bhang.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
		A. G.						M. s.																		
1873-74 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	The entries in column 9 show to really more than the former of actual import, owing to the fact that the outlaet in their books do not keep clear the transfers within the province, and consequently contain quantity of the original true import comes to be shown over and over again. For example : A. imports 100 maunds from the Central Provinces, he sells 10 of this to B. B. shows 75 under import head. Totalling these it would appear 175 maunds came in while in reality only 100 did.
1874-75 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1875-76 ...	2,506,394	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	23	...	...	22	317	...	...	4,317
1876-77 ...	2,433,181	...	...	...	31	...	...	...	...	...	...	...	...	...	...	...	...	...	23	...	...	22	317	...	...	4,981
1877-78 ...	2,237,054	85	10	...	31	...	...	...	...	...	...	...	...	...	...	...	...	...	23	...	...	22	317	...	...	4,332
1878-79 ...	2,237,054	91	20	...	36	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	314	...	...	4,331
1879-80 ...	2,237,054	211	30	...	86	...	...	...	...	...	...	...	...	...	...	...	...	...	15	...	...	...	224	...	...	4,316
1880-81 ...	2,237,854	139	31	...	87	...	...	...	...	...	...	...	...	...	...	...	...	...	12	...	...	...	171	...	...	4,067
1881-82 ...	2,451,196	142	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	8	...	...	4,426
1882-83 ...	2,672,673	99	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	250	...	...	4,813
1883-84 ...	2,672,673	87	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	253	...	...	4,614
1884-85 ...	2,672,673	80	20	...	...	...	...	1,069	1	...	...	...	...	...	...	...	...	...	...	...	...	...	279	...	...	4,681
1885-86 ...	2,672,673	106	6	...	...	...	...	1,047	32	...	...	...	...	...	...	...	...	...	...	...	...	...	288	...	...	4,808
1886-87 ...	2,672,677	98	9	...	...	...	...	1,158	21	...	...	...	...	...	...	...	...	...	...	...	...	...	286	...	...	4,699
1887-88 ...	2,672,673	38	31	...	2	...	...	1,624	21	...	...	...	...	...	...	...	...	...	...	...	...	...	288	...	...	4,810
1888-89 ...	2,672,673	67	17	...	27	...	...	1,310	6	...	...	...	...	...	...	...	...	...	12	...	...	...	279	...	...	4,632
1889-90 ...	2,672,673	85	30	...	31	...	...	1,853	3	...	...	...	...	...	...	...	...	...	10	...	...	...	281	...	...	4,624
1890-91 ...	2,672,673	55	22	...	...	...	...	1,826	19	...	...	...	...	...	...	...	...	...	12	...	...	...	287	...	...	4,635
1891-92 ...	2,672,673	48	35	...	36	...	...	2,279	15	...	...	...	...	...	...	...	...	...	12	...	...	...	286	...	...	4,566
1892-93 ...	2,807,040	85	30	...	44	...	...	1,946	30	...	...	...	...	...	...	...	...	...	13	...	...	...	279	...	...	4,661

Assigned Districts for the years 1873-74 to 1892-93.

Amount of license fees.				Amount of fixed rate.				Total revenue.				Quantity sold (retail).				Revenue per head of population, column 41 ÷ column 2.	Population per retail license, column 2 ÷ column 36.	Remarks.
On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	From ganja.	From charas.	From bhang.	From other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.			
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	644	30	...	...	...	...	...	...	...	Information for the first two years 1873-74 and 1874-75 is not available and so all the columns are blank.
...	...	...	...	...	...	...	...	...	...	...	...	723	6	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	757	10	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	688	23	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	703	30	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	678	3	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	750	4	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	939	23	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	801	1	...	...	...	...	...	...	...	

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

AJMERE-MERWARA MEMORANDUM.

With reference to your office endorsement No. 3330-R., dated the 26th September 1893, and in continuation of my letter No. 724, dated the 16th October 1893, regarding the collection of certain information required by the Indian Hemp Drugs Commission I have the honour to state as follows.

2. As already reported in my letter quoted above, printed copies of the questions were sent to—

(1) the District Superintendent of Police,
(2) the Civil Surgeon, Ajmere,
(3) the Revd. Dr. J. Husband, and
(4) the Abkari Inspector.

Answers from Nos. (1), (2), and (4) have been received and are herewith submitted. These answers will, I fear, generally not be of much assistance to the Commission. The fact is that, so far as I can ascertain, there is no one in Ajmere-Merwara who has made a study of the subject or who desires any alteration in the existing system. The Revd. Dr. J. Husband, who laid the questions before the Committee of the Ajmere Total Abstinence Association, informs me that the questions asked do not come within the scope of the operations of the society.

3. The statement called for in paragraph 4 of Mr. McIntosh's circular No. 28 of 11th August 1893 has been filled in as far as possible and is herewith submitted. The only information available, which has been given in the statement in question, is the number of shops and the amounts realized by the sale of the contract of drugs for the past twenty years.

I regret that I am unable to furnish the other information required to complete the statement in respect of import, export, and sale of drugs, as no such accounts have hitherto been kept, and the present and the former contractors are unable to furnish the required figures.

The hemp plant is cultivated in Ajmere-Merwara to only an exceedingly limited extent, and here and there a few plants grow spontaneously. The total amount of hemp grown in these districts is insignificant.

No license fees or fixed duty are levied in these districts: the revenue is derived by selling the monopoly of the sale of drugs.

4. The points mooted in the memorandum referred to in paragraph 3 of Mr. McIntosh's circular of the 11th August 1893 are dealt with below:

(1) Care is taken that the hemp plants are sold to the contractor. In the case of wild plants they are either destroyed or sold to the contractor. A copy of the rules regulating the cultivation, &c., of hemp is appended.

(2) With the exception of bhang and majum, no hemp drugs are manufactured in these districts. Ganja and charas are imported from other districts, chiefly from the Punjab.

(3) No duty is levied on the importation of any drugs—

(*a*) The controlling authority is the Collector of Ajmere. There is one uniform system in Ajmere-Merwara, which is carried on under the Excise Act, XXII of 1881.

(*b*) A few wild plants are found here and there, but not to any large extent. The possession and sale of these plants are regulated by the rules referred to above. The plants being so few, no difficulty is experienced in controlling their possession and sale.

(*c*) The cultivation of the hemp plant is permitted under the rules already referred to. As a matter of fact, however, but very little hemp is cultivated, and that principally by *malis* and the Brahmins of Pushkar.

(*d*) The sole importer of the drugs is the contractor, to whom a license for the exclusive right of the sale of the drugs is granted. The import is covered by *rawannas* from the authorities of the districts whence the drugs are exported. On arrival the consignments are weighed and checked with the *rawannas* by the Excise officers and the police.

(*e*) There are no wholesale vendors here, and the contractor is the only person permitted to sell drugs by retail; he has his own shops in the district, which are under the supervision of the preventive staff: all shopkeepers employed by the contractor are supplied with 'nokarnamas' under the countersignature of the Collector.

(*f*) The drugs contract is sold yearly to the highest bidder; no rates or other tax are fixed. In case of failure on the part of the contractor to pay the contract money, the contract is resold and the deficiency, if any, is recovered from the original purchaser.

(*g*) As already stated the drug shops in the district belong to the contractor. Their number and sites are fixed by the Collector on application of the contractor with reference to the requirements of the people.

(*h*) The contractor supplies the drugs to his shops in the district. The average retail prices (to consumers) are as follows:—

	First quality per rupee.	Second quality per rupee.
Bhang	1 seer.	2 seers.
Ganja	16 tolas.	20 tolas.
Charas	4 „	5 „
Majum	32 „	40 „

The prices do not vary appreciably in the different parts of Ajmere-Merwara.

(*i*) The maximum amount of drugs for sale and possession is bhang or any preparation or admixture thereof, one-quarter of a seer: ganja or charas or any preparation or admixture thereof, 5 tolas.

(*j*) The average number of persons prosecuted during the past three years for smuggling drugs is nine. The preventive establishment patrol the district and check smuggling on any extensive scale satisfactorily.

(*k*) No modifications of the present excise system in respect to hemp drugs are under consideration.

(*l*) The required statement is annexed. Explanations in regard to it have been given in paragraph 3 of this letter.

(*m*) The system in force in Ajmere-Merwara is shortly as follows. The contract for drugs is put up every year to auction, and it is sold to the highest bidder, provided that there is no objection to the man. The contractor maintains shops for the retail sale of drugs at places fixed by the Collector with reference to the requirements of the people. But very little hemp is cultivated in Ajmere-Merwara, although, subject to certain rules, the cultivation is not prohibited and but a small quantity grows wild. The hemp plants are sold to the contractor. Bhang and majum are the only preparations made locally, ganja and charas being imported from other provinces, usually from the Punjab. The retail shops are supervised by the preventive establishment, who also patrol the district and successfully prevent smuggling on any large scale.

Statistics relating to hemp drugs in the Ajmere-Merwara District for the years 1873-74 to 1892-93.

Year.	Total population.	Cultivation of hemp plant for Ganjah.						Amount of imports from other provinces or states in Maunds and Seers.				Amount of exports to other provinces or states in Maunds and Seers.				Number of licenses for wholesale vend.				Number of licenses for retail vend.				Amount of license fees.				Amount of excise duty.				Total revenue.				Quantity sold (retail).				Average per head of population, column 41—column 2).	Population per retail license, column 2÷ column 36.	Remarks.
		Area under cultivation.			Licenses for cultivation.																																			
		Ganjah.	Charas.	Bhang.	Ganjah.	Charas.	Bhang.	Of ganjah.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Of ganjah.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Of ganjah.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	Of ganjah.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	On ganjah.	On charas.	On bhang.	On other preparations of the hemp plant.	Total.	On ganjah.	On charas.	On bhang.	On other preparations of the hemp plant.	Total.	From ganjah.	From charas.	From bhang.	From other preparations of the hemp plant.	Total.	Of ganjah.	Of charas.	Of bhang.	Of other preparations of the hemp plant.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
		M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.										Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. a. p.	Mds. s.	Mds. s.	Mds. s.	Mds. s.	Rs. a. p.		
1873-74	316,022	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,265 0 0	...	...	...	...	'007 0 0	...	
1874-75		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,691 0 0	...	...	...	...	'008 0 0	...	
1875-76		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,529 0 0	...	...	...	...	'010 0 0	...	
1876-77		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,501 0 0	...	...	...	...	'009 0 0	...	
1877-78		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,434 0 0	...	...	...	...	'009 0 0	...	
1878-79	326,331	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,300 0 0	...	...	...	...	'008 0 0	...	
1879-80		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,330 0 0	...	...	...	...	'008 0 0	...	
1880-81		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,275 0 0	...	...	...	...	'009 0 0	22,018	
1881-82		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,486 0 0	...	...	...	...	'007 0 0	25,480	
1882-83		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4,816 0 0	...	...	...	...	'010 0 0	25,440	
1883-84		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4,810 0 0	...	...	...	...	'010 0 0	25,440	
1884-85		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5,931 0 0	...	...	...	...	'013 0 0	26,795	
1885-86	460,722	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5,931 0 0	...	...	...	...	'013 0 0	26,795	
1886-87		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5,431 0 0	...	...	...	...	'011 0 0	26,795	
1887-88		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5,430 0 0	...	...	...	...	'011 0 0	26,795	
1888-89		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6,900 0 0	...	...	...	...	'013 0 0	20,031	
1889-90		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5,376 0 0	...	...	...	...	'011 0 0	20,031	
1890-91		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	*6,035 0 0	...	...	...	...	'010 0 0	20,031	
1891-92	542,551	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	*6,035 0 0	...	...	...	...	'013 0 0	20,031	
1892-93		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6,740 0 0	...	...	...	...	'012 0 0	23,580	
		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7,270 0 0	...	...	...	...	'013 0 0	20,130	

N. B.—Column 26 shows the number of drug shops belonging to the contractor.
Note.—The figures for shops and revenue in this return for the years marked with an asterisk will not coincide with those in the Annual Administration Reports, as the latter include opium shops and outstanding balances.

N.B.—Column 41 shows the contract money.

COORG MEMORANDUM.

The answers refer to ganja, which is called indifferently in Coorg, ganja or bhang. Charas is unknown.

Only one system in the small province of Coorg.

The Commissioner of the province is head of the Excise.

Two Inspectors of Excise and six other officials under the Commissioner.

On Act No. XXII of 1881, an Act to amend the law relating to Excise Revenue in Northern India, British Burma, and Coorg. On the rules framed in conformity with sections 11, 12, 20, and 55 of that Act, sanctioned by the Chief Commissioner of Coorg as the chief revenue authority in the province, having effect from 19th May 1882.

I am doubtful whether wild hemp is actually found, but hemp springs up in the coffee near cooly lines and near the huts of the wild tribes and no one owns to its cultivation. A cooly in weeding the coffee will try to avoid pulling up the plant unless his master happens to be looking.

Impossible to say with any degree of accuracy, but as the contractor has not complained, and I have had no complaints from planters as to their coolies being stupefied by the drug, probably to a very limited extent indeed.

No attempt has been made to control the possession of such drug. If its sale was attempted to any extent, it would come to the ears of the licensed vendor, and the seller would be prosecuted, but I have heard of no such cases.

Cultivation not prohibited, but a license must be taken out first. As a matter of a fact, however, hemp is not cultivated in the province.

To none, if a license is asked and given, but, as already stated, the plant is not cultivated in Coorg.

No ryot or other person is allowed to cultivate hemp without a license from the Parpattegar; the Excise and village officers would report any such case. There have been a few prosecutions of people for growing a few plants of hemp near their huts in the last two or three years. This has checked the practice somewhat.

Only one—the contractor.

If a ryot did cultivate for export, he would have to obtain a special pass under rule 33, but no such case has occurred. The contractor, being the sole importer, makes his own arrangements for the import, storing, and transport of the drug. For the import a license is required.

Licenses are granted by the farmer, who is the wholesale vendor and has to keep accounts: the retail vendors are selected by the farmer, but must be approved by the Commissioner, who countersigns the licenses. They are visited by the Excise officers, accounts inspected, and fortnightly returns of results reported. License holders can sell for ready money only and not more than $\frac{1}{4}$ of a seer of ganja and 5 tolas of majum.

There is no tax on ganja and other hemp drugs. The right to procure and sell ganja is leased out for 3 years to the farmer whose tender has been approved of. If the contractor fails to pay on the appointed dates the instalments due, the contract is liable to be cancelled. Besides the contract amount a fee of one rupee per mensem for each shop at Mercara and Virajendrapett, and of annas 8 in other places is paid.

No special precautions against evasions are taken; the vendors who have licensed shops, even if any unlicensed shops escaped the notice of the officials, would at once bring the matter to the notice of the Excise Department.

One shop has been allowed to each of the 6 taluks or sub-divisions of Coorg except to the Nanjarajpatana Taluk, in which there are two, one at head-quarters and one in the municipal town of Somvarpett. No local option is recognized. At the same time the Commissioner would never sanction the opening of a shop unless the inhabitants either petitioned for it or were willing to have it.

No, the contractor makes his own arrangements.

He sells at from 10 to 12 annas a seer to the retail vendors, and they sell at from 14 annas to one rupee to the public.

Yes, a vendor must not sell to any individual in one day more than ¼ seer of ganja and 5 tolas of majum except to the holder of a pass from a Magistrate.

No minimum price is fixed for the drug.

No smuggling from other provinces or from the Native State of Mysore has been brought to notice. There have been 8 prosecutions in the last two years for illicit cultivation, but they have been only small cases of a few plants found in compounds by the Excise officers. No special measures have had to be taken to prevent it.

None.

Is practically *nil*. (Extent of cultivation).

Confined to the Government farmer.

41½ maunds in 1891-92.
56 maunds in 1892-93. } Amount of probable consumption.

Rupees 798 per annum—Revenue.

The Excise officers send in to the Commissioner a diary fortnightly as regards the ganja shops.

The vice of ganja-smoking to excess is comparatively rare in the province. Kurumbaars, the wild tribe most addicted to it, are a peculiarly inoffensive non-criminal tribe; the Yerwars and Kapilas, who also smoke ganja, are more troublesome, though not by any means habitual criminals.

Statistics relating to hemp drugs in the Province of

Year.	Total population.	Cultivation of hemp plant for narcotics. Area under cultivation. Ganja.	Charas.	Bhang.	Licenses for cultivation. Ganja.	Charas.	Bhang.	Amount of imports from other provinces or states in Mauns and seers. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Amount of exports to other provinces or states in Mauns and seers. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Number of licenses for wholesale vend. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	Number of licenses for retail vend. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	48
								M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.											
1873-74 ...	108,313	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	12	...	...	3	12	...	...	...	...	12
1874-75 ...	108,313	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	12	...	...	3	12	...	...	...	...	12
1875-76 ...	108,313	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	12	...	...	3	12	...	...	...	...	12
1876-77 ...	108,312	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	12	...	...	3	12	...	...	...	...	12
1877-78 ...	108,312	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	5	...	...	2	5	...	...	...	...	5
1878-79 ...	108,312	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	5	...	...	2	5	...	...	...	...	5
1879-80 ...	108,312	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	4	...	...	2	4	...	...	...	...	4
1880-81 ...	108,312	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	4	...	...	2	4	...	...	...	...	4
1881-82 ...	178,302	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	4	...	...	2	4	...	...	...	...	4
1882-83 ...	178,302	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	4	...	...	2	4	...	...	...	...	4
1883-84 ...	178,302	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6	...	...	1	6	...	...	...	...	6
1884-85 ...	178,302	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6	...	...	1	6	...	...	...	...	6
1885-86 ...	178,302	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6	...	...	1	6	...	...	...	...	6
1886-87 ...	178,302	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6	...	...	1	6	...	...	...	...	6
1887-88 ...	178,302	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6	...	...	1	6	...	...	...	...	6
1888-89 ...	178,302	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6	...	...	1	6	...	...	...	...	6
1889-90 ...	178,302	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6	...	...	1	6	...	...	...	...	6
1890-91 ...	178,302	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6	...	...	1	6	...	...	...	...	6
1891-92 ...	178,055	...	...	...	...	...	...	10 0	...	...	...	...	...	...	...	1	6	...	...	1	6	...	...	...	...	6
1892-93 ...	178,055	...	...	...	...	...	...	88 0	...	...	...	...	...	...	...	1	6	...	...	1	6	...	...	...	...	6

N.B.—A small quantity of ganja sprung up spontaneously about Trasenpett in ryots' fields.

Coorg for the years 1873-74 to 1892-93.

Year.	Amount of license fees. On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	Total.	Amount of field duty. On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	Total.	Total revenue. From ganja.	From charas.	From bhang.	From other preparations of the hemp plant.	Total.	Quantity sold (retail). Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Revenue per head of column 2.	Population per retail license, column 3 ÷ column 26.	Remarks.
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	Rs. a. p.	Rs.	Rs.	Rs.	Rs. a. p.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. a. p.	Rs.	Rs.	Rs.	Rs. a. p.	M. s.	M. s.	M. s.	M. s.			
1873-74 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14,026		Columns—3, 4, & 5 ... Bhang or ganja is not cultivated in Coorg.
1874-75 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14,026	6 to 8	... No licenses were issued.
1875-76 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14,026	9 to 12	... Accounts of imports have not been kept by the former contractors prior to 1876-77.
																				14,026		
1876-77 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28,052	12 to 16	... No exports during the years.
1877-78 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28,052	18, 19, 20 ...	No separate licenses have been given.
1878-79 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42,078	23, 24, & 25	
1879-80 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42,078	27 to 41 ...	Information is not available from 1879-74 to 1892-93 owing to the contract amount and license fees on ganja having been included in the amount of opium contract. Separate duty was not levied on ganja and other drugs.
1880-81 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	44,875		
1881-82 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	44,875		
1882-83 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·70	29,717	
1883-84 ...	632 8 0	...	...	...	632 8 0	...	...	...	...	...	632 8 0	...	...	...	632 8 0	...	...	...	...	0·70	29,717	
1884-85 ...	658 0 0	...	...	...	658 0 0	...	...	...	...	...	658 0 0	...	...	...	658 0 0	...	...	...	...	0·70	29,717	
1885-86 ...	658 0 0	...	...	...	658 0 0	...	...	...	...	...	658 0 0	...	...	...	658 0 0	...	...	...	...	0·70	29,717	
1886-87 ...	699 0 0	...	...	...	699 0 0	...	...	...	...	...	699 0 0	...	...	...	699 0 0	...	...	...	...	0·70	29,717	42 to 45 ... Accounts were not kept by the contractor prior to 1891-92.
1887-88 ...	699 0 0	...	...	...	699 0 0	...	...	...	...	...	699 0 0	...	...	...	699 0 0	...	...	...	...	0·70	29,717	
1888-89 ...	699 0 0	...	...	...	699 0 0	...	...	...	...	...	699 0 0	...	...	...	699 0 0	...	...	...	...	0·70	29,717	46 ... Vide explanation for column 42, therefore the revenue per head of population is shown blank up to 1892-93.
1889-90 ...	798 0 0	...	...	...	798 0 0	...	...	...	...	...	798 0 0	...	...	...	798 0 0	...	...	...	...	0·85	29,717	
1890-91 ...	798 0 0	...	...	...	798 0 0	...	...	...	...	...	798 0 0	...	...	...	798 0 0	...	...	...	...	0·85	29,717	
1891-92 ...	709 0 0	...	...	...	709 0 0	...	...	...	...	...	709 0 0	...	...	...	709 0 0	41 20	...	...	...	0·85	29,842	
1892-93 ...	798 0 0	...	...	...	798 0 0	...	...	...	...	...	798 0 0	...	...	...	798 0 0	56 4	...	...	...	0·95	29,842	

In some years, was sold to the Government contractor by the owners of the fields.

BALUCHISTAN (QUETTA-PISHIN) MEMORANDUM.

No. 7432, dated the 30th December 1893.

From—The Political Agent and Deputy Commissioner, Quetta-Pishin,

To—The Agent to the Governor-General and Chief Commissioner in Baluchistan.

I have the honour to acknowledge the receipt of your office endorsement No. 6286, dated the 17th ultimo, forwarding a copy of the correspondence from the Secretary, Indian Hemp Drugs Commission.

2. In reply I beg to report that the only social body which seemed likely to take an interest in the matter appeared to me the "Band of Hope, Baluchistan," Quetta. It is comprised of men of almost all religious denominations, and the object is the total abstinence from all intoxicating drugs and drinks. A copy of the questions set forth by the Commission, together with a copy of the correspondence, was sent to the Secretary, who has written to say that "the society is not in a position to answer the questions."

3. The questions were sent to the Assistant Political Agent, Quetta, the Extra Assistant Commissioner, Pishin, and the Native Assistant, Chaman. The replies furnished by the Extra Assistant Commissioner, Pishin, is marked A. The other two officers have not answered any of the questions.

4. The questions set forth for "medical evidence" were forwarded to the following officers:—

(1) Principal Medical Officer, Quetta ... ... 1 copy.

(2) Agency Surgeon, for Civil Surgeon, Quetta, Hospital Assistant, Quetta, Pishin, and Chaman ... ... 4 copies.

They were requested to furnish the replies by the 15th instant, but no answer has yet been received. Their replies will be submitted to you immediately they are received in this office.

5. I have recorded my own replies to the questions, which are marked B.

6. A statement was attached to the Secretary's letter No. 28, dated the 11th August 1893, which requires information from 1873-74 to 1892-93. The Quetta-Pishin district was formed only in 1883, but I regret that the figures are not available for more than three years. These, too, as far as the number of retail licenses goes, are not very accurate, the information having been obtained from the contractors.

The contractors cannot furnish the quantities imported each year, nor the amount of each drug sold. One contract is given for intoxicating drugs, and the revenue derived from bhang, ganja, and charas respectively cannot be ascertained. From the statistics obtained for the first six months, April to September, of the current financial year, it appears that proportion of sales of the three articles is approximately as under:—

Bhang	1
Charas	12
Ganja	1
	14

7. The sale of these drugs is now regulated by the rules framed by the Revenue Commissioner on the 14th July 1893, which are embodied (*vide* pages 21, 22, 25, and 26) in a memorandum on the excise system of this district, a copy of which is enclosed, marked D.

8. In the third paragraph of his letter No. 28, dated the 11th August 1893, the Secretary has asked that a memorandum should be prepared setting forth clearly and fully the system of administration at present in force in respect to these drugs. To this letter a note is added containing the points in regard to which the Commission specially desire information. I beg to record below the information as far as this district is concerned:—

(*a*) The system is uniform in the district. The general control rests with the Deputy Commissioner. The administration of the system, which is based on Act XXII of 1881 and the rules made thereunder by the Revenue Commissioner, is carried out by the Assistant Political Agent at Quetta, the Extra Assistant Commissioner at Pishin, and the Native Assistant at Chaman.

(*b*) Wild hemp is not found in this district.

(*c*) Hemp is cultivated to a very small extent in one or two villages of the Quetta subdivision. The produce is sold to the Government contractor. The hemp produced during the last year, 1892-93, did not amount to more than some twelve seers.

(*d*) The contractors who obtain annually the right to sell the drugs by retail import the drugs. Permits are issued to them to enable them to import drugs from Sindh and the Punjab. No special measures are adopted to supervise the storing and transport of these drugs.

(*e*) The system of licensing the retail vend is given in the rules referred to in the 6th paragraph of this letter.

(*f*) The right to sell the drugs is sold annually by public auction. The amount thus fixed is recovered by monthly instalments.

(*g*) There is no "local option." The number of shops is fixed by the Deputy Commissioner. Shops are generally allowed in thickly populated parts of the town.

(*h*) No rate is fixed at which the drugs must be sold. The contractor fixes his own prices. The present retail prices of the drugs are the following :—

Bhang	...	...	...	Re.	1 per seer.
Charas	...	...	...	Rs.	20 per seer or 4 annas a tola.
Ganja	...	...	...	„	7-8 per seer or Re. 0-1-6 a tola.

(*i*) The maximum amount fixed for retail sale of each drug is the following :—

Bhang	...	...	...	½ seer.
Charas	...	...	...	5 tolas.
Ganja	...	...	...	5 „

(*j*) No cases of smuggling from other provinces or Native States have come to my notice.

(*k*) No modifications of the present excise system in respect to hemp drugs are under consideration.

Statistics relating to hemp drugs in the Province of Baluchistan

Year.	Total population.	Cultivation of hemp plants for narcotics. Area under cultivation. Ganja.	Charas.	Bhang.	License for cultivation. Ganja.	Charas.	Bhang.	Amount of imports from other provinces in maunds and seers. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Amount of exports to other provinces in maunds and seers. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Number of licenses for wholesale vend. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.	Number of licenses for retail vend. Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Quetta. (a)																									
1880-81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	3	13	13	13	...	39
1891-92	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	3	13	13	13	...	39
1892-93	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	3	13	13	13	...	39
Pishin.																									
1880-81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	3	9	9	9	...	27
1891-92	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	3	8	8	8	...	24
1892-93	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	3	7	7	7	...	21

(a) Census of 1891.
(b) Charas, bhang, and ganja form one contract.
(c) Columns 9 to 16, information not available.

(*Quetta-Pishin District*) *for the years 1873-74 to 1892-93.*

Amount of license fees. On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	Total.	Amount of fixed duty. On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	Total.	Total revenue. From ganja.	From charas.	From bhang.	From other preparations of the hemp plant.	Total.	Quantity sold (retail). Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Revenue per head of population, column 41 ÷ column 2.	Population per retail license, column 2 ÷ column 26.	Remarks.
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
				(b) Rs. A. P.										Rs. A. P.					Rs. A. P.		
...	...	...	...	9,000 0 0	...	...	...	...	...	...	...	...	...	9,000 0 0	Not known.				0 5 0	734	
...	...	...	...	9,300 0 0	...	...	...	...	...	...	...	...	...	9,300 0 0	"				0 5 2	734	
...	...	...	...	10,125 0 0	...	...	...	...	...	...	...	...	...	10,125 0 0	"				0 5 7	734	
...	...	...	...	5,050 0 0	...	...	...	...	...	...	...	...	...	5,050 0 0	"				0 1 8	1,737	
...	...	...	...	2,700 0 0	...	...	...	...	...	...	...	...	...	2,700 0 0	"				0 0 11	3,054	
...	...	...	...	4,350 0 0	...	...	...	...	...	...	...	...	...	4,350 0 0	"				0 1 5	2,233	

(c) Columns 27 to 30, 37 to 40, one contract is given for intoxicating drugs. Details not available.
(d) Columns 32 to 36, no Excise duty is levied.
(e) Columns 42 to 45, statistics not available.

KASHMIR STATE MEMORANDUM.

1. Cultivation of hemp does not prevail in Kashmir.

2. The hemp plant, however, grows spontaneously throughout Kashmir proper.

3. It is abundant in Wantipora, Haripore, and Anantnag tahsils of the Anantnag district, and in the Nagam tahsil of the Srinagar District, growing on both banks of the river Jhelum and Arveni and Kaimu nallahs.

4. The growth of wild hemp is ordinarily dense. Almost all wild hemp which is called Talia in the Punjab, and is generally female plant in the above-mentioned tahsils, is used for the preparation of ganja locally known by name gard bhang (chura charas).

5. The total quantity of gard bhang annually manufactured in ordinary years is about 70 maunds, but in the year Sambat 1950 the total production of ganja amounted to about 35 maunds, the hemp plant having been considerably damaged by the recent flood.

6. Four hundred maunds of fibre are annually produced, but, for reasons stated above, the total quantity of fibre in Sambat 1950 amounted to 160 maunds only.

7. Down the city on both banks of the river Jhelum wild hemp known as Kathiya bhang does not produce gard bhang (chura charas), and it is only used for its fibre and twigs for burning.

8. About 600 maunds of fibre is annually produced down the river and in the Utarmachipura and Sri Pratap Singhpura tahsils and ilaqa Magan of the Pattan Tahsil and Khinhama.

9. Zamindars pay to the lessee fixed amount as duty which varies according to the extent of the growth for the fibre and twigs of the hemp plant growing down the city and in the tahsils mentioned in paragraph 8.

10. The leaves of the hemp plant are trodden under foot, and cleaned by sieve to prepare gard bhang, and this process is continued until the leaves are reduced to powder and seeds separated. This is always done by lessee in Srinagar, where the leaves are brought to undergo this process of manufacture.

11. Manufacture and sale of gard bhang (chura charas) and fibre are auctioned, and the highest bid in the current year, Sambat 1950, amounted to Rs. 3,240.

12. The monopoly of sale is practically given to the lessee, who appoints his own men for retail sale and makes his own arrangements for control of the growth of the wild hemp plant, the production of the ganja, and for its fibre.

13. The number and sites of retail shops are not fixed, and it is optional for the lessee to open retail shops at suitable places not objected to by the people according to the requirements of the consumers.

14. The maximum quantity for retail sale to, or possession by, the ordinary consumers of gard bhang is 5 tolas.

15. No minimum price is fixed for "gard bhang," but it is usually sold at 3 pice per tola.

16. Illicit sale to, and possession of gard bhang by, consumers in excess of the maximum amount are now generally dealt with on the criminal side under the State Penal Code for disobedience of rules duly promulgated. The rules are, however, defective and make no provision for prosecuting a man manufacturing ganja without a license or destroying the wild hemp plant, or for other similar cases, or binding the lessee to keep up register of produce of the drugs and sale. Framing of the new rules as more effective preventive measures for such purposes is under consideration.

17. The illicit sale of the Yarkand charas apparently prevails, but to a very small extent, as the Yarkand charas is not liked by the Kashmiris, which is the only drug passing through Kashmir for British India.

18. The drug being usually leased, lessee makes his own arrangements for prevention of the illicit sale, as he does for the control of the growth of the plant. The contractor of duty on custom and octroi also in his own interest has supervision on the Yarkand charas to see that it passes the country sealed intact, as, if sold in the city, he is entitled to duty on the same.

19. The annual consumption of the ganja or locally known gard bhang (chura charas) is about 63 maunds, or, in other words, the entire quantity thus manufactured is locally consumed.

20. The gard bhang as produced in this province is of inferior quality, and being not liked by the people in British India its smuggling is of rare occurrence, or in fact I cannot quote a single case of this nature.

21. In the present year lessee, on account of damage done to the hemp plant by the recent flood, could not produce more than 35 maunds, and he had therefore purchased the Yarkand charas passing through Kashmir to meet the local requirements by mixing the Yarkand charas with the local produce, foreign produce being not liked by the consumers, generally.

22. Green or dry leaves of bhang are not sold for drinking and smoking. Bhang is very seldom used in this province for drinking and it is not at all used for smoking, and the people drinking it, whose number can hardly be more than 200, clean the dry leaves in their houses and roast them a little. A few dry leaves are put in a koondi with some black-pepper to prepare a fluid, and sometimes sugar also is mixed to make the liquid sweet to the taste. There is no prohibition for possession of the bhang leaves in any quantity.

23. Bhang is also used in the preparation of majum, which is eaten to some extent by the Hindustanis and well-to-do Kashmiris.

24. The quantity of majum does not exceed one maund a year.

25. Majum is manufactured by slightly boiling leaves, which are taken out of water and put into hot ghi; ghi possessing narcotic properties when mixed with ata and sugar makes majum for eating, but there are no habitual eaters of majum.

26. Cultivation of hemp in this province is only impossible on the hills; and, excepting the stony lands, it can be cultivated throughout the province; but on account of the wild hemp, the growth of which is abundant throughout Kashmir proper, cultivation of the plant does not prevail at all, though not prohibited by the State.

27. Higher up the river in the three tahsils of the Anantnag district and in the Nagam tahsil of the Srinagar district the hemp plant is cut by the zemindars of the neighbouring villages in the month of Kartik, lessee on behalf of the State, when hemp and manufacture of ganja are auctioned, receiving leaves of the plant in full and half of the fibre, the rest half of the fibre and the twigs going to the zemindars in lieu of their wages.

28. Ganja does keep good with ordinary care in skins of sheep at most for two years after which it quite loses its effect, and no measure can prevent its deterioration. If not carefully kept free from wet and atmosphere, it loses its effect earlier than this.

29. Fakirs and a few Musalmans and Pandits of the Srinagar city and towns smoke gard bhang (chura charas).

30. The villagers are not accustomed to these drugs.

31. The total number of persons who do smoke ganja is in this province approximately 2,000, and including the people of British India, the servants of visitors in spring, and the fakirs visiting the country on pilgrimage, the number may fairly be taken as 2,500, and they can be classed as follows:—

Habitual moderate consumers, each consuming as an average about $\frac{1}{6}$ tola per diem, costing about one pice Kham	2,000
Habitual excessive consumers, each consuming as an average about 1 tola per diem, costing 3 pice	50
Occasional moderate consumers, each consuming as an average about one masha ...	400
Occasional excessive consumers, each consuming about $\frac{3}{4}$ tola, costing 2 pice and a pie	50

Bhang is believed to be an astringent and anti-rheumatic also.

32. The consumers are generally of low classes, Muhammadan and Hindu fakirs and a few notoriously bad characters, though well-to-do persons, mostly illiterate, idleness leading them to the practice of consuming gard bhang, and they are generally grown-up men.

33. The use of the hemp drug as a habit is doubtless injurious mentally and physically, but there are other stimulants which are in no way less injurious than these drugs. The use of bhang for drinking, which is in no way stimulant, is of course most injurious, making the consumers lazy, coward, and senseless when taken in excess.

34. Bhang is considered as digestive, but I have seen cases in which consumers being intoxicated ate much, and the result was on the contrary just the reverse, causing indigestion and leading to frenzy.

35. It is easier than opium to break off the habit of smoking ganja or gard bhang as locally known, and the habit of consuming the same is due to bad company and idleness, which may gradually develop into the excessive, though moderate in the beginning. Considering

the population of the province, which, according to the recent census, is 949,041 souls, the number of consumers of gard bhang is very small, and in case of entire prohibition, which may give rise to discontent among the habitual consumers, it cannot amount at all to a political danger in the Kashmir Province.

36. The area under the wild bhang being not measured and the lessees being not required under the rules to keep up registers, I cannot furnish information by years as asked for in the statement. I, however, give revenue on account of hemp drugs for the last twenty years. I could not get any further information for compilation of the statement, and it is impossible to prepare statement without such information as far as figures by years are concerned.

Year.	Revenue.	Remarks.
	R. A. P.	
Sambat 1931	8,703 4 0	
„ 1932	8,371 11 0	
„ 1933	9,517 2 0	
„ 1934	9,967 11 0	
„ 1935	1,059 9 6	
„ 1936	1,053 6 0	
„ 1937	3,471 0 0	
„ 1938	3,200 0 0	
„ 1939	3,200 0 0	
„ 1940	3,239 0 0	
„ 1941	3,899 5 0	
„ 1942	4,250 0 0	
„ 1943	4,250 0 0	
„ 1944	4,250 0 0	
„ 1945	4,847 0 0	
„ 1946	4,750 0 0	Revenue is entered in "Chilki" rupees, one "Chilki" being equal to 10 annas Imperial.
„ 1947	6,008 5 3	
„ 1948	8,320 0 0	
„ 1949	7,192 9 6	
„ 1950	5,184 0 0	

NEPAL DARBAR MEMORANDUM.

Answers to Questions relating to Hemp Drugs.

The ganja of this part of the country is of two kinds, the stem of one is white and of the other black: the latter is better than the former. Some of the plants of both kinds bear flowers, and such plants are no good. The plant which does not bear flowers, and the fine leaves of which get twisted together, is the ganja. The method of preparation is as follows:—

When the plant puts forth fine down, the tip of the plant is cut off and the big leaves are plucked off, and the plant is shaken from time to time, so that the down may fall off. This causes a large number of branches and fine leaves to be produced and the latter getting twisted and stuck together are called in Nepalese *Lăṭă*. When it is found that the plant is in the *Lăṭă* state it is cut down and kept in the dew for about a week, and after that each *Lăṭă* is separately wrapped in a piece of fine plantain bark and being tightly tied with string is put by. Some people flatten it by pressing it under pieces of tat (gunny). Two or three days after this it becomes fit for use. The ganja plant exudes a thin gummy water. That plant is squeezed between the palms of both hands, and the gummy substance, which sticks to the hands, is scraped into a vessel and is called charas. This charas is also of two kinds: the second kind is here called *Yarkan* and is somewhat better than charas.

Near the Himalayas west of Katmandu, that is, in the hills from Mankamana to Redi, the ganja grows somewhat more abundantly than in the other mountainous parts of Nepal, and in the Nepalese Terai it is also somewhat more abundant than in the hills.

Ganja is known by no other name in this country; both the black and white stem plants are called ganja. The plant which produces much seed is no good; that which produces little seed is good.

It cannot be ascertained in what special kind of soil and at what elevations it grows, because it grows here in different places.

Sometimes it grows densely and sometimes scattered. It has no particular habit in this respect.

No one cultivates ganja in this country. Some persons in the hills plant a few trees which are to be had growing wild. The leaves of the plants which bear flowers are bhang. Particulars regarding charas are given in answer to question No. 2.

Ganja is not cultivated here, it grows wild, so no methods of cultivation can be stated.

By slitting the stem of the plant and inserting a piece of opium or clove or bhiroza wood and tying up the part with string, the ganja becomes somewhat more intoxicating. This is done by those who know about it and is not the work of any particular class.

No one sows the ganja seed in this country; the plant grows wild.

The male plant of the ganja is solid and the female one is hollow. The male plant is more intoxicating than the female. When the plant has attained a height of two or two and a half feet it is slightly slit, and ascertained whether it is a male or female.

There is no one in this country who cultivates only ganja, and it is not the custom to cultivate it here, because it grows wild in different places. Therefore it cannot be stated in what kind of soil it grows. There being no cultivators of it, there is no prohibition against its cultivation. A small duty is levied simply to keep down consumption.

MEMORANDUM

ON THE SYSTEM OF ADMINISTRATION IN HIS HIGHNESS THE NIZAM'S DOMINION IN RESPECT TO THE HEMP DRUGS.

I.—The control of the growth of the Hemp plant.

1. The use of the drugs in question in this dominion being very limited, and having never prevailed in any considerable extent, have drawn no particular attention of the administrators to attach any special rules or regulations in the shape of law in respect of the same. However, it is not allowed that any one may grow the hemp if he likes to.

Though there is no particular staff to take care of growing the hemp, yet the contractors of the ganja sale monopoly watch this very keenly, and at their complaints and bringing the cases to the notice of the local Revenue authorities due action is taken to destroy the crop grown by any person for his private use.

No order or any kind of license is required for growing the hemp: any one if he knows the secrets of growing and curing it can cultivate the same, but it is an understood law that he must sell the produce to the authorized contractors. There not being any strict supervision or control over this, it cannot be said that this rule is invariably and strictly observed. But at the same time it may be noticed here that there are very limited number of cultivators in a very few places in the whole terrritory who know the art of growing and curing ganja, and it is grown not more than enough for the local wants.

2. As no wild hemp has been found to grow in this country, therefore no notice about it is taken.

3. The export and import of the drugs to and from the British territories are very systematically and strictly controlled by the Custom Department, and a duty of Rs. 10 per maund is levied on the import as well as on the export of ganja and of Rs. 3-5-0 on bhang.

N.B.—Only one kind of ganja, flat, is manufactured here; the broken leaves of the plant go as bhang, which is of very inferior kind. Charas is almost unknown in the whole dominion.

II.—The sale of hemp drugs.

4. The sale of ganja is controlled and restricted by giving the monopoly of it to one person or company for a limited jurisdiction. The system of giving the monopoly as a rule is uniform for the State. It is auctioned at the end of a financial year by the Revenue officers in their districts, in part and parcel for one or more years. In small districts the contract of the sale is given together with other poisons three or four* in number, and even with the opium, because, owing to the small sale of the drugs in question, people do not venture to take them separately. The contract for Hyderabad City is given by the Excise Department. The contract given by the Revenue officers also remain subject to the administration and orders of the Commissioners of the Department.

* 1. Arsenic.
2. Strychnia.
3. Bachnag.

5. The said contractors are authorized to purchase ganja from the growers—they keep a store of it and sell it to the retail vendors, or keep their own shops in their jurisdiction. These contractors generally sublet the retail vending, and supply the drugs at some fixed or the market rates. The contractors purchase their stock from the places within the State which have reputation for growing ganja. Only in very bad years, when the ganja crop totally fails here, it is imported from the British territory, and the same cause makes it export. The custom duty on the frontier of the State is against the trade.

6. There is no restriction of any other kind in the sale of the drugs—it can be sold at any place, to any person, and up to any quantity.

No site for shops is fixed by the Government authorities, *i.e.*, the Excise or Revenue officers. In the districts no license for the shop is required and no shops are auctioned.

The stock kept by the wholesale contractors and the shops of the retail vendors are under no inspection and supervision.

The sale being so small, and there being no fear or chance of any kind of smuggling, no supervision is necessary.

7. No rate of the whole or retail sales of the drugs is fixed. The average price of the wholesale of ganja has been about Rs. 25 per maund, and to the retail vendors it is sold from

Re. 1 to 1½ per seer, who sell it to the consumers at the rate of one tola from about ¼ to ½ an oz. for a quarter of an anna, the bhang from 1 to 2 ozs. for the same money, and the majum about one ounce for one anna.

As far as my inquiries go, about the same prices seem to prevail in all parts of the dominion in an ordinary year; but in a bad year, and when ganja is imported from outside of the State and for which the custom duty at the rate of Rs. 10 per maund is paid, the price rises. In some part it has been double last year, as owing to the excess of rain the ganja crop had failed.

8. No maximum or minimum price or amount is fixed by the Government for any kind of sale, or possession by ordinary consumers, or for retail sale of the drugs.

9. As enough of the hemp is grown in this country, as it is quite a cheap thing, as stated before, and as the customs duty is a great check upon its trade, consequently there is no temptation for any kind of smuggling from other provinces or any other Native State, the illicit cultivation, possession, or the sale of the drugs; hence no special measures to prevent this are necessary.

10. As the Government revenue from this source is very limited and the consumption of the drugs is not great, therefore the modifications of the present excise system have not attracted any particular attention. However, at any want of the kind being felt, due actions certainly will be taken by the Excise Commissioner.

III.—The Government revenue and the duties imposed on the drugs.

Till some five years ago, the drugs in question were sold in Hyderabad City by a few shopkeepers who had enjoyed the monopoly of it for years at the payment of certain sum called "nazrana." In the districts the monopoly of the sale of them together with other poisons was also enjoyed by certain banyas uninterruptedly. The Government circular, No. 52, dated 1294 Hijri, provides that a duty from annas 2 to Rs. 3 per month will be levied on the ganja and bhang shops in the town of Hyderabad, and accordingly the nazrana or mashul was paid.

From the year 1298 F=1889 A.D., this system was changed with giving the monopoly to the highest bidder.

As the drugs under the standing arrangements are generally included with the contract of opium or the contract of other poisons, as stated before, therefore their separate account and statistics are not available; but the following figures and the appended statements will give a fair idea of the financial aspects of the matter under report.

The statements A and B* will show the export and import for last five years of ganja and bhang respectively from and to British territory, as well as the places in His Highness's dominions subject to octroi. They prove that the trade of the drugs is not much.

When the crop in this country fails, a little of it is imported, and the same case is *vice versâ*. The custom duty, which is Rs. 10 per maund on ganja and Rs. 3-5 per maund on bhang, is perhaps against this trade.

Statement C* will show the rail-borne traffic for last five years of the drug from the tract in which the hemp is sown for the use of about two-thirds of the population of this country. Of course the statistics for the quantity carried by other means are not available. However, the figures and other facts prove that the production of the drug is very limited. For instance, in Hyderabad City and cantonment there are no more than 46 shops, and in the whole dominions only 270 shops of ganja and bhang; 28 shops of majum are at present in Hyderabad, and about 50 shops of the same are in all districts.

Some of the majum shops in the districts are temporary; they make and sell majum only in Moharrum, Holi, and such other festivals.

The revenue derived in the city of Hyderabad for last five years stand thus:—

	Rs.	A.	P.
For the year 1298 F.	986	15	7
„ 1299 F.	1,600	0	0
„ 1300 F.	1,600	0	0
„ 1301 F.	1,600	0	0
„ 1302 F.	1,100	0	0

The monopoly of the districts has been sold for the amount as follows. This includes the sale of other poisonous drugs too:—

	Rs.	A.	P.
For the year 1298 F.	10,900	9	0
„ 1299 F.	9,762	3	0
„ 1300 F.	10,227	7	7

*Not printed.

The above statement is exclusive of the monopoly given by the Sarfkhas, Paigha, and Jagirs, for which no statistics are available. The Government revenue from the custom duties on the import and export of ganja and bhang for the last five years has been as follows:—

Name.	Year.	Import.	Export.
		Rs. A. P.	Rs. A. P.
Ganja	1297 F.	834 8 0	194 0 0
	1298 F.	975 8 0	48 4 0
	1299 F.	701 8 0	22 0 0
	1300 F.	704 12 0	2 3 0
	1301 F.	753 8 0	189 8 0
TOTAL ...	.....	3,969 12 0	455 15 0
Bhang	1297 F.	45 5 0	.....
	1298 F	51 12 0	6 3 0
	1299 F.	58 10 0	.....
	1300 F.	55 15 0	.....
	1301 F.	55 11 0	.....
TOTAL ...	.....	267 5 0	6 3 0

The sale of the drugs in the towns visited by me for the purpose is ascertained thus :—

	Ganja.	Bhang.
Hyderabad, per day	1½ maunds.	20 to 40 seers.
Raichur	1 to 2 seers.	½ a seer.
Gulbarga	10 to 15 seers.	
Aurangabad	2 to 3 ,,	About 1 seer.

For further details *vide* my answer to the printed question forwarded on the 12th of November 1893.

M. HOSSAIN,

Director of Agriculture and Commerce, Nizam's Dominions.

MEMORANDUM ON GANJA IN MYSORE BY MR. L. RICKETTS, EXCISE COMMISSIONER.

What variety of Indian hemp is utilized for ganja in Mysore?

1. The species of Indian hemp which is in use in the Mysore Province, under the appellation of "ganja" in Hindustani, or "Bangi-soppu" in Kanarese, is what is generally known as the *Cannabis sativa of Linn.* The plant is cut during inflorescence with the resin carefully preserved on the leaves, dried and made into bundles.

Cultivation of Indian hemp restricted.

2. The cultivation of the above hemp in Mysore is forbidden except under a free license granted by the Deputy Commissioner of the district on condition that, within one month after the preparation of ganja, the latter shall be sold to the licensed ganja contractor at a fair valuation, or exported under the Deputy Commissioner's pass, and that the licensee may, if he so desires, retain for his own private consumption ganja not exceeding 14 lbs., provided that the area of the land cultivated with hemp is not less than one acre. Except in three or four small plots of land in which the licensed cultivators failed from inexperience to make proper ganja, no attempt has been made by any one to grow the hemp in this province, evidently owing to the cultivators of land being ignorant as to the stage of growth when the plants should be cut so as to be fit for ganja. Therefore the ganja required for consumption in this province is imported from the Madras Presidency. Wild hemp is nowhere found in this province. Self-sown hemp is occasionally to be met with in gardens and backyards of native houses; but when found they are immediately uprooted and destroyed.

What admixtures of ganja are in use, and mode of preparation?

3. Besides the pure ganja, the only preparations of it generally used and recognized in this province are majum and halva. Majum is a condiment made with ganja powder and other materials in the following proportions:—

	By weight.
Ganja powder	20 seers.
Poppy-seeds	10 „
Dalchini (cinnamon) and anise-seed	6 „
Jaggery	2 maunds.
Ghee	3¾ seers.

The ganja powder is put into syrup made of jaggery and water and boiled. The mixture is then boiled with ghee and the other ingredients above referred to to form what is called majum. Halva is also a condiment prepared from the expressed juice of ganja powder boiled in water. In the liquid so obtained, sugar is dissolved and mixed with almonds, plums, cloves, nutmeg, cinnamon, cardamoms, anise-seed, and other spices.

System under which ganja revenue is raised.

4. The system under which the revenue from ganja is derived by the Darbar is the minimum guarantee system, under which the sole monopoly of the wholesale vend of ganja for the whole province, exclusive of the Civil and Military Station of Bangalore, is given out on contract for fixed periods, on condition that the contractor of the wholesale vend shall guarantee to the Darbar that the duty payable by him on the wholesale vend of ganja and majum at the prescribed rates shall not be less than the amount guaranteed by him per annum; that he shall sell drugs only to licensed vendors; that the drugs sold shall be of good quality; that he shall always keep on hand not less than one month's supply at each wholesale shop and two months' stock at the provincial head-quarters depôt at Bangalore; that he shall carefully account for all receipts and expenditure of the drugs; and that disorderly conduct and irregular transactions at wholesale shops shall be strictly prohibited. As the hemp is practically not cultivated in this province, as explained in paragraph 2 above, the contractor is permitted to import the supplies of ganja from the Madras Presidency. The bulk of ganja consumed in this province is obtained by him from the North Arcot district of the Madras Presidency at an average cost of 2 annas per seer. No modifications in the present system are under contemplation.

Import of drugs.

Rates of duty.

5. The rates of duty payable to the Darbar on the wholesale vend of ganja and majum are as follows:—

	As.
Ganja per seer of 24 tolas	6
Majum or any other preparation of ganja except halva per seer of 24 tolas	2

No duty is levied on halva.

Wholesale rates.

6. The prescribed wholesale prices at which the contractor is bound to sell the drugs to licensed retail vendors are—

	As.
Ganja per seer of 24 tolas	10
Majum or any other preparation except halva per seer of 24 tolas	4

It will be seen from the above figures that the rates of gross profit allowed to the contractor by the Darbar are 4 annas per seer of ganja and 2 annas per seer of majum. It has been ascertained that the contractor's costs per seer of ganja are 8 annas and 11 pies, so that he gains 1 anna and 1 pie on every seer of ganja sold by him.

Minimum guaranteed amounts for the current contract.

7. The minimum annual amounts guaranteed by the contractor for the current contract of four years from 1st July 1893 to 30th June 1897 are as per particulars below :—

	Rs.
For 1893-94	12,500
„ 1894-95	13,000
„ 1895-96	13,500
„ 1896-97	14,000
	4) 53,000
	13,250

average per annum.

Limit of wholesale vend.

The wholesale vendor shall not sell the drugs in any less quantity than as specified below :—

	Ganja. Seers.	Majum. Seers.
In Bangalore and Mysore towns	10	5
At all other places	5	2

Wholesale shops.

9. The wholesale shops licensed free by the Deputy Commissioners of districts for the convenience of retail vendors number as follows :—

Districts.	No.
1. Bangalore	14
2. Kolar	9
3. Tumkur	5
4. Mysore	9
5. Hassan	5
6. Kadur	5
7. Shimoga	7
8. Chitaldrug	3
TOTAL ...	57

Retail shops.

10. The number of retail shops is limited to meet the wants of the consuming public. The existing retail shops are as per particulars below :—

	No.
1. Bangalore city	3
1. Rest of the Bangalore district	21
2. Kolar	18
3. Tumkur	8
4. Mysore town	6
4. Rest of the Mysore district	14
5. Hassan	5
6. Kadur	9
7. Shimoga	22
8. Chitaldrug	3
TOTAL ...	109

Rates of retail shops to population.

11. In principal towns the rates of retail shops to population are as follows :—

Bangalore city, 1 to 26,762 inhabitants.

Mysore town, 1 to 12,341 inhabitants.

In the mofussil, excluding the above towns 1 to 46,892 inhabitants.

Retail rates.

12. The prescribed retail prices at which licensed retail vendors are bound to sell the drugs to the public are:—

	As.
Ganja per seer of 24 tolas	13
Majum or any other preparation, except halva, per seer of 24 tolas	6

The rates of profit allowed to them by the Darbar are therefore 3 annas per seer of ganja and 2 annas per seer of majum.

License fees.

13. No license fees are levied for the retail vend of the drugs except in the cities of Bangalore and Mysore, where a fee of Rs. 3 per mensem is charged for each license.

Restrictions to retail vend.

14. The licensed retail vendor shall not sell more than 4 tolas weight of the drugs to any person during any one day. He shall not permit disorderly behaviour in his shop or premises, suffer any gambling whatever therein, knowingly permit prostitutes or persons of bad character to meet therein, or permit any person to take the drugs in any such quantity as to produce stupefaction or to consume the same in the shop or premises, or knowingly sell the same to persons keeping ganja-khanas, where people resort to smoke or partake of the drugs. He shall be bound to give information of suspicious characters to the Magistrate or Police officer.

Direction and control of the administration of ganja revenue.

15. The direction and control of the administration of ganja revenue, as well as other items of excise revenue, vest in the Excise Commissioner, the principal executive authorities being the Deputy Commissioners of districts.

The Act and Rules in force.

16. The Excise laws under which the ganja revenue is administered throughout the province under one uniform system described in paragraph 4 above are the Imperial Excise Act XXII of 1881 as amended by Act VI of 1885, and as extended to this State by Regulation III of 1885 and the rules framed thereunder.

Storing of drug, transport, and supervision.

17. The drug is imported by the contractor on duly signed passes, and, on its arrival at Bangalore, it is duly weighed and checked with the entries in the passes by the Government supervisor in charge of the provincial depôt. The drug is then stored in the provincial depôt. The requisite supplies of the drug are on written application issued to the wholesale shops under the contractor with transport passes duly signed and sealed by the supervisor in charge of the provincial depôt. On arrival of the consignments at the places of destination, the local taluk officials duly check them and make them over to the wholesale vendors concerned, who at once duly book the consignments in the prescribed registers furnished by the Darbar. The wholesale shops are from time to time inspected and the sales therein checked and verified by the inspecting officers of the department. The sales in retail shops are likewise checked and verified by the said officers.

Mode of collection of duty and precautions against evasion.

18. The duty is collected in the following manner:—

(1) The minimum amount guaranteed by the contractor is payable to the Darbar in 12 equal monthly instalments on or before the 20th of each month.

(2) The contractor shall pay into the local treasuries of the State duty on wholesale sales of the drugs at the prescribed rates. If the total amount of the duty accruing on the wholesale sales be not sufficient in any month to make up the instalment of the guaranteed amount for that month, the contractor shall pay such further amount as may be required to make up the deficiency. On the other hand, if the said duty exceed the said instalment, the excess shall be available to make up the deficiency in any other month of the same official year, this deficiency being adjusted by short payments into the treasury when the instalment for the month is tendered to the extent of such *net* excess sales as may be available when such instalment fell due. If the total amount of duty due on the wholesale sales for any year of the contract period exceed the guaranteed amount for that year, the contractor shall not be entitled to the benefit of such excess.

(3) To secure the duty leviable on the drugs imported and consumed the following precautions are adopted:—

(*a*) No one shall be permitted to import or sell the drugs by wholesale except the licensed contractor.

(*b*) Any person found in possession of more than 5 tolas of the drugs shall be liable to prosecution.

(*c*) No person except licensed vendors shall sell the drugs in any form whatever.

(*d*) No one except the licensed contractor shall purchase the drugs from any one permitted to cultivate the hemp.

Mode of disposal of retail vend.

19. The right of retail vend is not disposed of generally by public auction. But when more than one application is received for one and the same shop, the Deputy Commissioner of the district concerned sometimes puts it up to auction. When an application for a license to sell the drugs is received, the local residents and officials are consulted; and if the want for a shop is really felt, the license is granted by the Deputy Commissioner with the previous sanction of the Excise Commissioner, the site for the shop being fixed by the Deputy Commissioner.

Preventive measures.

20. In addition to the establishment of a separate excise staff for the prevention and detection of clandestine cultivation and import of ganja, the members of the Police Revenue Sayer, Octroi, and Municipal Departments have been appointed as Excise officers under sections 24 and 34A of the Excise Act. Illicit cultivation and smuggling are not carried on to any appreciable extent.

How and by what classes of people ganja is consumed, and its effects?

21. Ganja is used for smoking by simply crushing the dry leaves and mixing them with tobacco in the proportion of two parts of the former to one part of the latter. 'Majum and halva are generally eaten in sweetmeats. An infusion of the withered flowers of the hemp plant is occasionally made and mixed with pepper, poppy-seed, and fried Bengal gram, the preparations being either diluted and drunk under the name of "ramras," or made up into pills and swallowed, or dissolved in jaggery water and milk or expressed juice of the cocoanut and drunk under the name of "bhang." The generality of the consumers are said to be Mahomedans, many of whom are idle and disreputable men of the lower classes, as also Bairaghis, Gosayis, Rajputs, and a few other Hindus. It is represented that where the quantity consumed is below 2½ tolas weight, it does not produce any bad effects; but where this is exceeded, stupefaction or even temporary insanity is the result. In the Lunatic Asylum, Bangalore City, instances were to be met with of patients affected by excessive use of ganja. The Excise Commissioner is, however, not aware of any instances in which crime was excited under its influence or permanent insanity was produced by it. He is informed that it tends to affect the nervous system and undermine the constitution gradually.

Ganja revenue.

22. The revenue from ganja for the past 20 years is as per particulars below:—

Years.	Revenue. Rs.
1873-74	10,296
1874-75	9,989
1875-76	11,342
1876-77	11,240
1877-78	11,026
1878-79	10,224
1879-80	6,130
1880-81	4,036
1881-82	6,033
1882-83	6,127
1883-84	7,528
1884-85	8,061
1885-86	8,556
1886-87	6,943
1887-88	6,872
1888-89	7,557
1889-90	9,400
1890-91	11,501
1891-92	15,517 for 15 months or 12,414 for 12 „
1892-93	14,197

In the year 1878-79 the privilege of selling ganja in the province was partly rented out and partly worked under a system of license fees. The gradual fall of the revenue from 1879-80 was due to the contract system having been replaced by the *amani* management. In consequence of efficient preventive measures adopted since June 1889 to put down illicit cultivation of the hemp and smuggling of the drug, the revenue increased from Rs. 9,400 in the year 1889-90 to Rs. 14,197 in the year 1892-93. In 1891-92 the official year was ordered to be reckoned from 1st July to 30th June instead of from 1st April to 31st March, and therefore

that year consisted of 15 months, during which period the revenue amounted to Rs. 15,517, the average for 12 months being Rs. 12,414. As the ganja contract of the Civil and Military Station of Bangalore has been given out separately by the Resident since the year 1886-87, the ganja revenue thereof is not included in the abovementioned figures from 1886-87.

Consumption of ganja. The total consumption of the drugs in 1892-93 was 41,326 seers.

Incidence of consumption per head of population. The incidence of consumption per head of population in 1892-93 was one-fifth of a tola.

Incidence of ganja revenue. The incidence of ganja revenue per head of population in 1892-93 was ½ pie.

Comparison with arrack and toddy revenue. The arrack and toddy revenue for 1892-93 being Rs. 15,92,475-5-6 and Rs. 13,89,054-8-8, respectively, the ganja revenue for the same year is inconsiderable when compared with the arrack and toddy revenue and also with the total population of the province, excluding the Civil and Military Station of Bangalore, namely, 4,843,523 inhabitants.

MYSORE STATE.

Statistics relating to hemp drugs for the years 1873-74 to 1892-93.

Year.	Total population of districts.	Cultivation of hemp plant for narcotics. Area under cultivation. Ganja.	Cultivation of hemp plant for narcotics. Area under cultivation. Charas.	Cultivation of hemp plant for narcotics. Area under cultivation. Bhang.	Cultivation of hemp plant for narcotics. Licenses for cultivation. Ganja.	Cultivation of hemp plant for narcotics. Licenses for cultivation. Charas.	Cultivation of hemp plant for narcotics. Licenses for cultivation. Bhang.	Amount of imports from other provinces or states in maunds and seers. Of ganja.	Amount of imports from other provinces or states in maunds and seers. Of charas.	Amount of imports from other provinces or states in maunds and seers. Of bhang.	Amount of imports from other provinces or states in maunds and seers. Of other preparations of the hemp plant.	Amount of exports to other provinces or states in maunds and seers. Of ganja.	Amount of exports to other provinces or states in maunds and seers. Of charas.	Amount of exports to other provinces or states in maunds and seers. Of bhang.	Amount of exports to other provinces or states in maunds and seers. Of other preparations of the hemp plant.	Number of licenses for wholesale vend. Of ganja.	Number of licenses for wholesale vend. Of charas.	Number of licenses for wholesale vend. Of other preparations of the hemp plant.	Total.	Number of licenses for retail vend. Of ganja.	Number of licenses for retail vend. Of charas.	Number of licenses for retail vend. Of bhang.	Number of licenses for retail vend. Of other preparations of the hemp plant.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
								M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.	M. s.										
1873-74																									
1874-75																									
1875-76																									
1876-77																									
1877-78																									
1878-79																									
1879-80																									
1880-81	4,575,623 C. and M. States 94,959							Details not available.																	
1881-82																									
1882-83																									
1883-84																									
1884-85																									
1885-86	4,695,648 C. and M. States 95,540																								
1886-87		...	...	...	...	...	...	344 10	...	...	...	...	...	...	...	57	...	...	5	62	90	...	...	14	110
1887-88		...	...	...	...	...	...	899 4	...	...	...	...	...	...	...	57	...	...	5	62	90	...	...	14	110
1888-89		...	...	...	...	...	...	540 20	...	...	...	...	...	...	...	57	...	...	5	62	90	...	...	14	110
1889-90		...	...	...	...	...	...	837 20	...	...	...	...	...	...	...	60	...	...	6	66	94	...	...	15	109
1890-91		...	...	...	...	...	...	1,009 20	...	...	...	...	...	...	...	57	...	...	6	63	90	...	...	15	105
1891-92	4,805,023 C. and M. States 96,098	...	...	...	...	...	...	957 13	...	...	...	...	...	...	...	57	...	...	6	63	107	...	...	15	122
1892-93		...	...	...	...	...	...	1,029 2	...	...	...	...	...	...	...	57	...	...	7	64	109	...	...	16	125
																57	...	...	7	64	109	...	...	16	125

Year.	Amount of license fees. On ganja.	On charas.	On bhang.	On other preparations of the hemp plant. Total.	Amount of fixed duty. On ganja.	On charas.	On bhang.	On other preparations of the hemp plant. Total.	Total revenue. From ganja.	From charas.	From bhang.	From other preparations of the hemp plant. Total.	Quantity sold (retail). Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Average per head of population, column 41 ÷ column 2.	Population per retail license, column 2 ÷ column 41.	Remarks.
1	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	M. s.	M. s.	M. s.	M. s.	Rs. a. p.		
1873-74						10,296	—	—		10,296	10,296	—	—		10,296					0 0 4	—	
1874-75						9,989	—	—		9,989	9,989	—	—		9,989					0 0 4	—	
1875-76						11,342	—	—		11,342	11,342	—	—		11,342					0 0 4	—	
1876-77						11,240	—	—		11,240	11,240	—	—		11,240					0 0 4	—	
1877-78						11,026	—	—		11,026	11,026	—	—		11,026					0 0 4	—	
1878-79						10,224	—	—		10,224	10,224	—	—		10,224					0 0 4	—	
1879-80						6,130	—	—		6,130	6,130	—	—		6,130					0 0 2	—	
1880-81						4,086	—	—		4,086	4,086	—	—		4,086					0 0 2	—	
1881-82						6,033	—	—		6,033	6,033	—	—		6,033					0 0 3	—	
1882-83						6,127	—	—		6,127	6,127	—	—		6,127					0 0 3	—	
1883-84						7,638	—	—		7,638	7,638	—	—		7,638					0 0 3	—	
1884-85						8,061	—	—		8,061	8,061	—	—		8,061					0 0 4	—	
1885-86						8,556	—	—		8,556	8,556	—	—		8,556					0 0 4	—	
1886-87						6,943	—	—		6,943	6,943	—	—		6,943	438 20	—	—	20 4	0 0 2	44,032	
1887-88						6,972	—	—		6,972	6,972	—	—		6,972	312 17	—	—	27 20	0 0 2	44,032	
1888-89						7,357	—	—		7,357	7,357	—	—		7,357	424 31	—	—	40 30	0 0 2	44,344	
1889-90						9,400	—	—		9,400	9,400	—	—		9,400	842 14	—	—	29 6	0 0 4	46,872	
1890-91						11,501	—	—		11,501	11,501	—	—		11,501	794 30	—	—	24 25	0 0 4	39,701	
1891-92						13,570	—	—		13,570	13,570	—	—		13,570	1,078 16	—	—	21 26	0 0 6	39,748	
1892-93						14,197	—	—		14,197	14,197	—	—		14,197	1,005 13	—	—	27 30	0 0 5	39,749	

Included in the Total Ganja Revenue.

Included in column 32.

Included in column 37.

Details not available.

18th September 1893.

L. RICKETTS,

Excise Commissioner.

EXTRACT FROM MEMORANDUM REGARDING GANJA AND ITS PREPARATIONS IN MYSORE BY MR. J. G. MCDONNELL, SPECIAL ASSISTANT EXCISE COMMISSIONER IN MYSORE.

I.—I framed the two sets of draft rules to deal with the check and supervision over drugs falling under the Excise Act for both the Mysore State and the Civil and Military Station of Bangalore, *vide* references quoted in the margin. The new rules (draft) printed and sent up to, and now before the Mysore Government, were originally drawn up by me in 1889, in co-operation with Colonel Campbell, the first Excise Commissioner in Mysore. For the purposes of the present enquiry I have made it my *special* duty to conduct personally a thorough investigation again into the whole subject, and the results recorded in this paper have thus the benefit of having been effected by an officer who has had 14 years' experience of this subject, and who has, moreover, been brought in constant and direct contact with both sellers and consumers at Bangalore and throughout the Mysore State during his tours of inspection. To render this paper as complete as possible I have enlisted the aid of a medical practitioner to give me the help required to dispose of the medico-legal queries put by the "Indian Hemp Drugs Commission."

(1) Pros. of the Government of Mysore, No. 212, dated 27th February 1885, covering Notification No. 229, dated 27th idem.
(2) Notification No. 2531—2756, dated 11th September 1886, by the Resident of Mysore.

II.—The following may be accepted as the definitions of ganja and the names under which the different productions and preparations thereof are locally known in the Province of Mysore :—

(1) *Botany.**—It is an annual, generally dicœcious. *Root*, white, fusiform. *Stem*, three feet to six, or twelve or more feet high in Mysore, erect, simple when crowded, branched when growing apart, angular, pubescent. *Leaves*, on long weak petioles, opposite or alternate, digitate, scabrous, leaflets 5 to 7, narrow, lanceolate, sharply serrated. *Stipules*, subulate. *Inflorescence*, males, racemose; females, in spikes. *Fruit*, ovate, one-celled, with a solitary seed.

(2) *Characteristics of Ganja.**—The flowering tops of the female plant bearing the remains of flowers, the ripe fruit and seed, the whole forming with the resin exuded and moistened with dew an agglutinated spike—rather longer than broad—carefully picked off and dried. It is of a dusky green colour and a characteristic odour.

(3) *Designations of Ganja, its products, and preparations.*—The "Indian hemp" referred to in the Ganja Rules and by the Indian Hemp Commission is the *Cannabis sativa, Linn.* N. F. *Urtricaceæ* of the Pharmacopœia. *Hindustani—Ganja; Canarese—Bangi-Soppu; Tamil—Ganja-Yela; Telugu—Bangi-Aku.* The intoxicating native productions and preparations of the plant are known as (1) *ganja*, (2) *charas (resin)*, (3) *bhang*, (4) *majum*, (5) *alwa*, (6) *churun*, (7) *curry*, (8) preparations according to pharmacopœia, (*a*) *Cannabin*, (*b*) *Extractum Cannabis Indicæ*, (*c*) *Tinctura Cannabis Indicæ*, (*d*) *Cannabinæ Tannas, and* (*e*) *Cannabinon.*

1. *Ganja.*—There are three varieties of ganja, which are or have been utilized in the Province of Mysore :—

(*a*) *Mulki or Kulli Ganja—sample in bottle marked (A).*—See para. II, clause (2), above for a description of the plant and para. III (*a*) for mode of cultivation, &c. As a rule the tiny leaflets are picked out by hand from the tops or agglutinated spikes as they appear when the plant is growing and the leaves are only seen on the larger branches and stems. The sample sent was not preserved by a professional cultivator, and clearly appears to have been prematurely removed from the plant, as the leaflets are apparent and large instead of being absent. The tops or agglutinated spikes are pinched off after heavy dew has fallen. In the sample sent it has been *pressed* instead of being preserved as usual in spikes. It will thus be seen that in good *mulki or kulli ganja* there should be very few or no tendrils at all: the resin, the flower, the ripe fruit, and a few immature seed all combined constituting the drug. The price is Rs. 75 to 80 per maund of 25 lbs. The *ganja*, when moistened with dew or water, is clammy to the touch as the resin is thus partially dissolved. The tops or agglutinated spikes when plucked are then put into a pot, the mouth secured against the action of the air with cloth covered with a coat of moistened clay and preserved for use. Thus treated and preserved from the action of the air, damp, etc., it retains all its virtues for a very long while. In one chemist's shop I saw the ganja preserved in a large glass-stoppered jar. In another I observed the "*tincture*" to be kept in a crystal-stoppered bottle, while the "*extract*" was kept in a loosely covered porcelain cup. In the latter case it must necessarily lose its virtues sooner than in the two former. In out-lying villages, where it is not pressed, it is exposed to the sun for three days,

* *Note.*—From Dr. Alexander Milne's "Manual of Materia Medica and Therapeutics," Second Edition, p. 49, modified to suit the circumstances in Mysore.

and then made into bundles, each containing twenty-four stalks 12 to 18 inches long with the tops or agglutinated spikes attached thereto as originally severed from the plant.

(*b*) *Vellore Ganja—sample in bottle marked (B).*—This ganja is imported from the Vellore district in the Madras Presidency. It is obtained as the "*kulli*" is in Mysore, but the tops or agglutinated spikes appear to embrace a large number of the smaller leaflets. These tops or agglutinated spikes are spread out on a date mat and packed quite closely together. Another mat is then placed over this and heavy flat stones laid thereon to compress the drug into flat cakes half an inch or so thick and several inches wide. The ganja is then made into parcels of two and a half maunds each, which are covered over with *goni* (hemp) cloth. It is then ready for the market. It is not so much appreciated as the "*kulli*" or "*mulki*" ganja. There is a good deal of powdered ganja added in packing. This is generally due to some of the larger leaflets being utilized; but more frequently the parcels made up by the cultivator are opened by the "*chetti*," trader, and some of the rejected powder obtained from the retail dealer inserted between the cakes. The rejected powder is a regular item of trade for this fraudulent purpose. The presence of the resin is not so marked in the Vellore ganja as in the "*kulli*" or "*mulki*" ganja. In many cases I was informed the resin or charas has been extracted by the application of warm water applied over the mats and then dried to prevent its becoming mouldy.

(*c*) *Coconada Ganja—sample in bottle marked (C).*—The spikes have been removed from the stalks. They seem fresh. This ganja is imported from the district of Coconada in Her Majesty's territory. When the ganja has become matured branches 6 to 9 inches long are wrenched off. A large *goni-bag*, about five feet long, to one end of which another circular piece of *goni* three feet in diameter has been stitched on, is provided. Into this *goni*-bag the ganja branches with the tops or agglutinated spikes on, after being dried, are thrown in and two men trample them down. Another armful of ganja is then thrown in and trampled down; and so on till the bag is quite full. The bag holds about 10 to 12 maunds. The upper opening is then closed in with branches of the ganja plant with hemp cords passed through and laced to the edges of the *goni*-bag. It is thus easily tampered with *en route*. From the careless manner in which the drug is gathered, the larger leaflets are utilized. The longer it is kept the darker the colour becomes. The light green colour observed in the fresher stuff is generally absent in the drug imported into Mysore. The price is Rs. 3 to 4 per maund delivered in Bangalore. This is the rate when purchased from the producer (see para. III (*b*) under Cultivation).

2. *Charas.*—This is the concentrated resin exudation collected from the leaves and tops or agglutinated spikes of the ganja plant. Men dressed in complete leather suits pass through the ganja fields rubbing and crushing themselves roughly against the plants early in the morning, just after sunrise and when a fall of dew has taken place. The gummy matter is then scraped off from the leather suits and forms the ganja-resin of commerce. There are other ways of collecting the resin, either by rubbing the leaves between the palms of the hand or over a cloth, and then collecting the resin deposited from the leaves, &c., which in that case is naturally mixed with the chaff. To test the vitality of the drug a pinch of ganja is placed in the palm of the left hand and pulverized with the thumb of the right hand, and a little water is then added. If the powder becomes adhesive and can be formed into a ball, it is good. If not, it is mere chaff, especially if it appears stale and mouldy and is dark in colour and the drug has lost its characteristic odour.

3. (*a*) *Bhang.*—This preparation of ganja is made up of the ingredients and in the proportions noted against each in the table as per margin. The ganja was put into 10 oz. of cold water and boiled for 5 minutes. The ganja was kneaded into the hot water with the hand, and the moisture drained and expressed with the hand therefrom. The stalks and seeds were then removed. The residuum was ground on a curry-stone into a fine paste and milk added as required to keep up the consistency. The other ingredients were then cast in and ground with the ganja into a fine paste. The weight of this ball was 530 grains. The cuscus and cucumber seeds were ground and kept separately in one ball, the weight of which was 440 grains. Both these balls were dissolved in 20 oz. of milk and passed through muslin, and the sediment, which weighed 340 grains, was then thrown away, as it was of no use. Sugar was then put in and the whole mixture was again strained. This mixture is enough for two men in one day. One-fourth of the quantity was taken before, and the other after meals, by each of the two men to whom it was given by me.

No.	Name of Ingredients.	Quantity.	Price.		
		Grs.	Rs.	A.	P.
1	Ganja	220	0	0	8
2	Cuscus (poppy-seeds) ...	120	0	0	1
3	Pepper	120	0	0	1
4	Dry ginger	40	0	0	1
5	Soapu (caraway seeds) ...	10	0	0	½
6	Cloves	10	0	0	½
7	Cinnamon	10	0	0	½
8	Cucumber seeds	120	0	0	1
9	Cardamoms	10	0	0	½
10	6 Almonds	120	0	0	4
11	Nutmeg	10	0	0	1
12	1 Rose	60	0	0	2
13	Sugar, ¼ seer	2,160	0	0	9
14	Milk, ¾ seer	20 oz.	0	1	6
	TOTAL ...	.....	0	3	11

Bhang is sometimes eaten dry without the addition of water or milk. A man will take one and half tolas (270 grs.) in two doses or the whole at once as he is habituated to its use or not. "Bhang" is made daily as needed. "Bhang" is made at home and consumed there. "Bhang" is not sold in the bazaar in the Mysore Province. Marwadis, when making bhang (*a*), omit items 4, 6, and 7, but use milk only at the Holi (Kama) feast and on other occasions they add ghee.

(*b*) *"Bhangi-Subjee" is that to which "subjee (Ocimum Basilicum) seeds" have been added.*—All the ingredients used for bhang (3*a*) above, except sugar and milk are used for the "bhangi-subjee." Water is substituted for milk. It is a cooling drink, especially in hot weather.

4. *Majum.*— A recipé for making six maunds of majum is given in the margin. It is that adopted at the Government Central Distillery in this province by the contractor. The ganja powder collected in vending is utilized if not too old. It is broiled in an iron caldron. The ganja and the spices are all then pounded and kept separately. All the ingredients are now sifted, cleaned, and mixed. The jaggery is made into a thick syrup. The granular kind of jaggery is selected, as otherwise the majum will become a hard and ropy mass quite unfit for sale or use. The ghee is then put and well stirred in. While the mass is hot the other ingredients are added little by little and the whole mass thoroughly stirred up again and allowed to cool a little. Before it becomes quite cool the mass is manipulated with both hands and reduced to powder without leaving clots. The bazaar price of majum is 3 cash per tola. In every tola of majum there are 48¾ grains of ganja. The Government duty is 2 annas per seer (24 tolas) and the contractor's cost Re. 0-1-6. He sells it to the retail vendors at Re. 0-4-6.

No.	Name of ingredients.	Quantity.			Price.		
		Mds.	Sr.	T.	Rs.	A.	P.
1	Ganja (at cost price) ...	1	25	...	5	11	0
2	Cloves	...	3	...	0	10	0
3	Soapu (caraway seeds) ...	...	4	18	0	9	6
4	Cuscus (poppy-seeds) ...	...	15	8	2	8	11
5	Cinnamon	...	4	12	0	13	6
6	Jaggery	5	10	...	7	8	0
7	Ghee	...	15	...	4	3	6
	Firewood, 3 maunds ...	...	...	...	0	6	0
	Cooly	...	...	...	0	9	7
	TOTAL ...	7	37	14	23	0	0

5. (*a*) *Ordinary Alwa.*—A recipé for this preparation as made and sold in the bazaars is given in the margin with the proportions noted against each. The *rollong* is kneaded into a stiff paste with water. The paste is then washed over and over again with clean water and all the fluid collected in a vessel till the water runs clean from the rollong. The glutinous matter is rejected and the fluid allowed to stand for four hours. The supernatant liquid is then decanted off and the residuum alone retained. The sugar is boiled into a thick syrup, the residuum of the rollong added and stirred, till the whole mass thickens, when the ghee is poured on and is thoroughly amalgamated. The almonds are shelled, the kernels put into boiling water and allowed to soak till the outer jacket can be slipped off readily when pressed between the fore-finger and thumb. The essence of rose is then added. If a small piece of the alwa is applied to the tongue and it does not adhere to it, it is a proof that the process is completed. The almonds cleaned are placed entire on top of the alwa after it has cooled. When private parties want ganja added they supply the needful to the sweetmeat-man, who boils it with water till ebullition ensues, the water is then expressed out of the drugs and rejected, and the residuum is put into the ghee and boiled again and the syrup and residuum of the rollong are then added and the process completed as set forth above.

No.	Name of ingredients.	Quantity.	Price.		
		Seer.	Rs.	A.	P.
1	Rollong	1	0	3	0
2	Sugar	1	0	1	6
3	Ghee	½	0	2	3
4	Almonds (unshelled) ...	2½	0	5	0
5	Essence of rose	1/12	0	0	6
6	Ganja	*	0	0	0
	Firewood	...	0	0	9
	TOTAL ...	...	.....		

* According to the requirements of each private party needing the alwa. The quantity for adults in ordinary cases is given in receipts No. 5 (*b*) and (*c*) in next page.

(*b*) *Alwa.*—A recipé for the preparation of alwa for children. (1) One tola (180 grs.) of ganja should be boiled with a quarter seer (5 oz.) of cold water for quarter of an hour, the ganja is then taken in the hand and all the water expressed out of the residuum. The stalk and seeds are then removed. The ganja is now boiled with half a seer (12 tolas) of ghee for half an hour and then strained and the sediment rejected. (2) The sugar is now boiled with quarter seer (5 oz.) of cold water till it becomes a thick syrup. (3) The poppy-seed, dry figs, almonds, and rose petals should be well ground and put into item (2) and well mixed. The other ingredients should be well pounded. Koonkum flower and pachchai-kurpoor should be ground with a little water to form a sauce. All the ingredients are now cast into one vessel and the honey added and well mixed. This preparation is sold at one cash per ball of 54 grains which is a dose for a child eight years old. The ball contains $\frac{2}{3}$ grs of ganja.

No.	Name of ingredients.	Quantity.	Price.
		Tolas.	Rs. A. P.
1	Ganja	1	0 0 6½
2	Nutmeg	2	0 1 6
3	Cunchoori-root	½	0 0 ½
4	Cardamoms	½	0 0 3
5	Cloves	½	0 0 1
6	Caraway seeds (Soapu) ...	1	0 0 1
7	Cinnamon	1	0 0 1½
8	Sandal	1	0 0 2
9	Anise-seed	1	0 0 3
10	Rose petals	3	0 0 9
11	Honey	3	0 0 6
12	Dry figs	1	0 0 1½
13	Sugar	24	0 1 6
14	Almond	24	0 2 0
15	Koonkum flower (saffron) ...	⅛	0 1 0
16	Pachchai-kurpoor ...	⅛	0 2 6
17	Ghee	12	0 2 3
18	Firewood	...	0 1 4
	TOTAL ...	75¾	0 15 0

(*c*) *Alwa—Kamera-Jafran.*—A recipé for this preparation for adults is given in the margin. (1) The ganja should be boiled well and the water expressed out and rejected. The residuum is then ground. (2) The other ingredients should be pulverized and mixed with the ganja powder after it has been well boiled with ghee. This preparation is sold at five cash per ball of 180 grains, which contains 14⅖ grs. of ganja. The material difference between the two preparations *b* and *c* consists in the liquid infusion of the ganja after being boiled with the ghee being retained for children while in that for adults the "sediment" of the ganja after being boiled with water is bodily added to the preparations while the water is rejected.

No.	Name of ingredients.	Quantity.	Price.
		Tolas.	Rs. A. P.
1	Ganja	4	0 6 6
2	Nutmeg	4	0 3 0
3	Cunchoori-root	4	0 0 4
4	Cardamom	1	0 0 6
5	Clove	1	0 0 2
6	Caraway seeds (soapu) ...	2	0 0 2
7	Cinnamon	1	0 0 1½
8	Sandal	1	0 0 2
9	Anise-seed	1	0 0 3
10	Mace	1	0 2 0
11	Ghee	6	0 1 2
12	Jaggery	24	0 0 10
13	Firewood	...	0 0 9½
	TOTAL ...	50	1 0 0

(6) *Churun.*—A recipé for the preparation of churun is given in the margin. The ganja is mixed with 6¼ oz. of cold water and boiled for 20 minutes. The water is all expressed out of the ganja with the hand and the other ingredients are all fried properly on a metal or earthen platter and then ground to a fine powder on a curry-stone, except the cocoanut, which is cut up into minute pieces. The whole is lastly mixed with the sugar. The ghee is first dissolved and then added to the mass and well mixed up. The total quantity weighed about 22 tolas. This is enough for five men for one day, but only three men ate of this quantity—4 tolas (720 grs.) each. It is eaten little by little at intervals during the day. It will keep for six months. Each tola of churun contains 16⅛ grs. of ganja.

No.	Name of ingredients.	Quantity.	Price.
		Tolas.	Rs. A. P.
1	Ganja	3	0 1 8
2	Kadale (Bengal gram) ...	6	0 0 2
3	Cuscus (poppy-seeds) ...	½	0 0 ½
4	Cinnamon	½	0 0 1
5	Clove	½	0 0 1
6	Pepper	½	0 0 1
7	Almond	½	0 0 1
8	Ginger	½	0 0 ½
9	Dry cocoanut	3	0 0 1
10	Fried rice	3	0 0 ¼
11	Beaten rice	3	0 9 ¼
12	Soapu (caraway seed) ...	½	0 0 ½
13	Sugar	6	0 0 3
14	Ghee	6	0 1 2
15	Firewood	...	0 0 8
	TOTAL ...	33½	0 4 6

(7) *Curry.*—With other ingredients of a native curry a tola (180 grs.) of ganja is ground on a curry-stone and added to every ½ seer (one lb.) of mutton used and partaken of by the meat-eating classes.

(8) The following are the preparations of ganja according to the British Pharmacopœia with a brief summary giving the analysis, mode of preparation and doses, the medicinal

properties of the drug, the antidotes applied in case of overdose, and the actions and uses thereof extracted from standard medical works. I have given at the end of this paper, under head VII, the results of two special experiments made, under my personal supervision, with the native drug and that obtained from the chemist, prepared according to the Pharmacopœia.

* *Analysis.*—(*a*) *Cannabin*, a resin on which its properties depend and developed only in a warm country, a small quantity of volatile oil, extractive, &c. The resin is of a dark green colour, has a fragrant odour, a warm, acrid, and bitter taste, and is soluble in alcohol and in ether and in the fixed volatile oils.

† (*b*) *Extractum Cannabis Indicæ.*—Indian hemp in coarse powder, 1; rectified spirit, 5: macerate seven days, press out the tincture, distill off the spirit, and evaporate to a soft extract.

6 of Indian hemp yield 1 of alcoholic extract.

Dose—¼ to 1 grain in pill.

† In *delirium tremens*, 2 grains of extract of Indian hemp given every hour for four times gave relief. L. M. R. '81, 192.

† Extract of Indian hemp varies considerably in strength, consequently the dose should always be small to commence with; toxic symptoms have been produced with 1 grain.

† (*c*) *Tinctura Cannabis Indicæ.*—Extract of Indian hemp, 1; rectified spirit, 20: dissolve = (1 in 20).

22 minims contain 1 grain of extract.

Dose—5 to 20 minims with one dram of mucilage, adding 1 oz. of water.

In prescribing the tincture it should be previously triturated with the mucilage, or the resin will be precipitated by the water.

† (*d*) *Cannabinæ Tannas.*—(Not official).—An amorphous yellowish powder, sparingly soluble in water, alcohol, and ether. Soluble in acidulated alcohol.

Dose.—4 to 8 grains mixed with sugar and taken as a powder was introduced as a hypnotic, but its effects are very uncertain.—T. G. '85, 329, 379.

† (*e*).—*Cannabinon.*—(Not official).—A soft resinous substance, generally found as a 10 p. c. trituration with sugar of milk, also introduced as a hypnotic, but the dose (1½ grains) was followed by excitement, collapse, and cramps.—T. G. '85, 286; L. M. R. '86, 434.

† *Medicinal Properties.*—Sedative, anodyne, and hypnotic, has been used with success in megrim and delirium, also in menorrhagia and dysmenorrhœa. It is combined with belladona in whooping cough, in tetanus, and hydrophobia. It does not produce constipation or loss of appetite, on the contrary it restores the appetite which has been lost by chronic opium and chloral drinking.—L. '89, i, 625.

† *Antidotes.*—In case of over-dose, hot brandy and water may be given, vegetable acids, such as lemon-juice, vinegar, and the like, and the patient be allowed to sleep. A blister to the nape of the neck is recommended to control its violent action.

† *Actions and uses.*—Narcotic, antispasmodic, intoxicant. Like alcohol it produces a variety of effects on different individuals: in one a dull heavy state of pleasant reverie, with a rapid succession of unconnected ideas; in another a cheerful activity with giddiness. Taken as an intoxicant in large doses Dr. Angus MacDonald says: "it quickens the circulation and exhilarates the spirits, producing a kind of mirthful or extravagant delirium, during which its victim alternately laughs, cries, sings, dances, or craves for food, all the while believing himself to be in a normal state of mind. Sometimes, however, it makes its victim ill-tempered, violent, and pugnacious. It usually produces an inordinate appetite for food, and acts powerfully as an aphrodisiac. In medicinal doses it acts upon the cerebro-spinal system, causing, in moderate doses, exhilaration of spirits, a kind of inebriation and hallucination followed by confusion of intellect and tendency to sleep; in large doses it causes stupor. After the primary effects of a full dose have passed off, the patient is said to be left in a state of catalepsy." Dr. Milne adds that it alleviates pain and subdues spasm, and for this purpose it has been given, but with extremely variable results (it may be owing to inert specimens of it) in neuralgia, chronic rheumatism, painful menstruation, infantile convulsions, hydrophobia, and tetanus. In the latter disease a few striking cures have been achieved, but in other cases it has failed. Spasm and spasmodic coughs are frequently relieved by it; and some obtain sleep from it who are debarred the more certain soporific opium, owing to its evil effects. "It differs from opium in its

Extract half a grain to a grain cautiously increased to 4 or 5 grains according to the purity of the drug and the condition of the patient. Of the tincture ten minims cautiously increased to a fluid drachm, repeated at short intervals until the desired effects are produced. When administered in an aqueous vehicle, it requires mucilage to suspend it. The effects must be carefully watched lest the patient should injure himself whilst mentally incapacitated by it, as sometimes happens. Antimonials, salines, a blister, to the nape of the neck, &c., may be employed to control its violent action.

* From Dr. Angus MacDonald's "Note Book of Materia Medica," pages 522 and 523.

† Companion to the British Pharmacopœia, Fifteenth Edition, 1890, by Peter Squire.

effects, chiefly in not contracting the pupil, and in not causing loss of appetite, dry tongue, or constipation." In uterine hæmorrhage it often arrests the flooding and it relieves the pain in dysmenorrhœa.

III (*a*) *Cultivation.*—It is grown as an ordinary dry crop. The soil should be light and red and very deeply ploughed and well manured. There should be seasonable rain, and when crop is ripe heavy dews. The most efficacious, productive, and certain way is by raising the plant in pits. When specially cultivated a circular pit two to three feet in diameter and a foot or so deep is excavated and well manured with cow-dung and ashes. The plants are made to form a circle round the edge of the pit and the centre is heaped up with manure as required. The stems rise 5 to 7 and often 12 feet high, each as thick as a man's wrist and are supported by staves secured with ligatures from the aloe leaf. In other cases single plants are raised in each pit. The stem is then the thickness of a man's arm, five feet high and as much in diameter. The stem is taken in both hands and twisted at the root just above the surface of the ground to stunt the growth. It is said that this operation produces better and a more plentiful crop of spikes. There are two distinct varieties raised, one with a *dark green* and the other with *light green* coloured-stem. The dark-stemmed variety is more potential in its effects than the other. A maund or two of good first class "kulli or mulki" ganja can be obtained from each pit treated either way. The male plant is profitless and is uprooted and thrown away.

(*b*) *Costs, profits, Government duty, hints to trader.*—A maund of kulli ganja is sold for Rs. 75 or 80, while the drug imported and offered by the Government contractor sells at 33½ per maund (25 lbs). The former is all profit as the labour is but casual tending, while in the other Rs. 3½ to 4 a maund go to cover the original cost, including carriage (Re. 1 per maund) to Bangalore when purchased from the Government cultivator in Her Majesty's territory. If purchased from the monopoly-farmer it is double that price and more. The former price, plus Goverment duty, Rs. 15— Rs. 18½ to 19½ per maund, or, say, roughly, Rs. 20 per maund of 25 lbs. The Mysore Government contractor's profits are thus Rs. 12½ per maund. But this will all depend on how he sets about making his purchases, whether from the cultivator or Government monopoly farmer and in season. He should make his arrangements ere the crop is picked if he wants to purchase from the producer, while if from the monopolist he should time it, so as to secure his stock just as the new supply comes into market. If he delays, prices rise rapidly, and stocks are exported and he has naturally to pay more therefor than if secured in season. He thus loses a large slice of his profits per maund.

(*c*) *Clandestine cultivation—cause of.*—Clandestine cultivation pays well. There is no doubt that it is cultivated in backyards of many dwelling houses, *hittus* (gardens attached to backyards), and in other gardens also. This is particularly the case in large towns and villages, where such privacy affords great facilities to do so. The heavy duties imposed by Government, Rs. 15 per maund of 25 lbs., and the abnormally low price across the frontier offer strong inducements to commit this fraud on the Mysore revenue.

(*d*) *Spontaneous growth—not wild—Government patta.*—It has been and is still often found in all the eight districts of this province growing spontaneously *but not wild anywhere in Mysore*, as in some parts of India. This spontaneous growth is most marked in towns and large villages. It is found in backyards and in dry fields and gardens. This is due mainly to the seed when thrown away on dust heaps finding its way with the manure utilized in the fields and gardens, and germinating there after the first rains set in. It is not more abundant in one district than another now. The cultivation is not restricted to any locality. It can be raised anywhere under the conditions imposed in the Government patta. The fibre can be utilized by the cultivator. The drug must be disposed of to the Government contractor, less two seers, if so required, for the private consumption of the producer, but not for sale, provided one acre has been cultivated. The drug should be weighed by the village officers and disposed of in one month or it will be confiscated.

(*e*) *Mysore suited for growth—Results in two taluks noted.*—The climate and soil of the Mysore Province are well adapted for the production of the ganja plant. It has been found growing even in the Malnad after the heavy S.-W. rains are over. Some first class ganja was raised 15 years ago and later in Chickballapur taluk of the Kolar district of this province. This was evidently due to the cultivator knowing when to put down the seed and how to deal with the picking and curing of the spikes properly after being harvested. A trial at Dodballapur in the Bangalore district on the other hand failed as it was harvested prematurely and the immature stuff, about 14 maunds, was destroyed. The cultivator was ignorant of the value of the plant as a fibre producer and failed to utilize even this part of the produce.

(*f*) *Results of Ganja Rules as indicated by statistics of consumption.*—The enforcement of the ganja rules has removed the open cultivation of the drug and to some extent also to its growing spontaneously. The keeping of accounts has been rendered compulsory and

the rules as to their retention and production "true and correct" are rigidly enforced. These returns show the consumption to be on the increase, for it was 26,554 seers seven years ago, while in 1892-93 it was 57,015 seers for Ganja and majum.

(*g*) *Causes of rise indicated and improvements suggested.*—The rise is not wholly due to either the increase in population or to more persons taking to the consumption of the drug, but partially to these two causes combined with the enforcement of the rules generally for the whole province. In the City and Station of Bangalore, however, this increase is not so marked as in the outlying districts, but the reverse. The Government returns, however, do not at all represent the *actual consumption*, as both the clandestine production of the drug in the Province and the import thereof prevail to a very considerable extent. This is mainly due to the *superior quality and freshness* of the contraband "kulli" or "mulki" stuff over the stale and very inferior article offered by the Government contractor. The lack of encouragement afforded to informers and the very light sentences passed by the Magistracy for this offence greatly conduce to the rules being infringed as also to the existence of clandestine cultivation which is hard to detect and the import of the contraband drug which can be readily done with impunity. The Excise staff is too weak to cope with this evil, and but little encouragement is given to the men to stimulate their zeal. I proposed that the price of opium be raised to that at which it is sold in Her Majesty's territory, and that the price of ganja in the latter be raised to that sold in Mysore. This would remove the inducement of opium, the property of the Mysore State, after being sold to the shop-keeper, being smuggled into Her Majesty's territory; while ganja raised in Her Majesty's territory will not then find its way into Mysore. Both Governments would be benefited and each would be restricted to its own legitimate wants and know its own consumption more accurately. To ensure both Governments realizing a fair and just revenue from this source the production of ganja must be worked on the same lines as opium is with special concession to those who want to raise the plants for fibre only. In that case the village Revenue officers should see that Government revenue does not suffer by the disposal of the drug to the consumer or retail dealer, but only to the Government farmer. The surplus crop of drugs should be destroyed after 6 months if not sold to the farmer or exported. Preserved as it is in bulk and so carelessly secured from atmospheric air it rapidly deteriorates and becomes stale and unfit for use as the resin is dissipated. The drug turns black and mouldy and becomes noxious. The matter of equalizing the prices of the two drugs was referred to the Resident by the Darbar, but I am not aware of result. In large towns I suggested that the Municipal and Octroi officers be invested with powers of "Excise officers." They might be paid by results in the shape of rewards. Government approved of the step, but local action does not appear to have been taken. Considering that Government have made over several items of revenue to local bodies and in some places also the license fees on spirits, while mohatarfa as a separate cess is levied on drug-shops, the casual aid of such Municipal officials might with propriety be legitimately claimed by Government from such local bodies, especially as this will not interfere with their legitimate duties as the aid thus given will only be occasional.

(*h*) *Preparation of fibre and its market value.*—All that is required to prepare the fibre is to strip the leaves off and sever the branches, leaving clean switches or canes. These are tied into sheaves and cast into the first convenient pit of water and allowed to soak there. When the rind slips off readily between the fore-finger and the thumb pressed against the branch it is ready to be removed. This rind is beaten or trampled with the foot in the water to remove the outer coating. The result is a clean soft fibre which makes excellent cordage, cloth for packing, and bags for grain, &c. The following extract from Dr. Balfour's Cyclopedia (pages 43 and 44) will prove interesting and gives the market price of the fibre in England and Lahore:—

> "The hemp plants grow in Persia, Syria, Arabia, and *throughout* India. *In some places for its fibre*; in others, and generally, for its intoxicating products. In Kangra and the Punjab it *grows spontaneously* and in *abundance everywhere* in the sub-montane tracts in the Sutlej Valley, between Rampur and Sanganam, at an elevation of 3,000 to 7,000 feet, *but is cultivated for the fibre only* in the eastern portions of Kangra and Simla Hills. In 1859 an experimental consignment of two tons of Himalayan hemp was valued in the English market at from £30 to £32 per ton. The price at Lahore is about £15 to £16 per ton."
>
> Agricultural and Commercial.

IV.—*Ganja Statistics.*—The following tables I and II give the consumption of drugs in the province and the Civil and Military Station of Bangalore for the past 7 years and Government revenue for the same period respectively. The contractor is bound to pay a fixed guaranteed amount yearly which is obtained on tenders. This is realized in twelve monthly instalments. Fees of six and two annas per seer of ganja and majum respectively sold to licensed retail dealers are levied. If a larger amount is obtained by the rates prescribed than that guaranteed yearly, it is retained by Government, and booked as "excess sales" for that

year. This additional precaution was adopted from the 1st April 1889 with advantage to Government:—

Table I.—Consumption.

Years.	Ganja and majum.				Total.		Remarks.
	Station.		Province.				
	Seers.	Tolas.	Seers.	Tolas.	Seers.	Tolas.	
1886-87	7,801	...	18,753	13	26,554	13	
1887-88	7,768	...	21,606	20	29,374	20	
1888-89	8,254	12	19,023	9	27,277	21	
1889-90	8,499	...	26,854	14	35,353	14	
1890-91	8,890	...	32,784	...	41,674	...	
1891-92	8,175	...	35,498	15	43,673	15	
1892-93	6,740	...	50,239	11	56,979	11	
Total ...	56,127	12	204,760	10	260,887	22	

Table II.—Government Revenue.

Years.	Minimum sum guaranteed.	Station net Revenue.	Provincial Revenue.	Total.	Remarks.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1886-87	5,312 0 0	2,395 0 0	6,528 0 0	8,923 0 0	
1887-88	7,000 0 0	2,459 0 0	7,745 0 0	10,204 0 0	
1888-89	7,000 0 0	2,441 0 0	7,464 0 0	9,905 0 0	
1889-90	7,000 0 0	2,961 0 0	9,780 0 0	12,741 0 0	
1890-91	7,000 0 0	3,099 0 0	12,047 0 0	15,146 0 0	
1891-92	8,000 0 0	2,813 0 0	13,043 0 0	15,856 0 0	
1892-93	8,000 0 0	2,322 0 0	18,511 0 0	20,833 0 0	

MEMORANDUM BY COLONEL MAGRATH, DISTRICT MAGISTRATE AND COLLECTOR, CIVIL AND MILITARY STATION OF BANGALORE.

The system which controls the sale of the drugs commonly known as ganja and majum in the Civil and Military Station is almost the same as that prevailing in the Mysore State. Up to 31st March 1886 the contract of the Civil and Military Station for raising Government revenue was joint with that of the Mysore Darbar, the assigned tract receiving its share proportionately on the population. Since 1886-87 the contract is distinct, but the Darbar's subordinate executive staff for city also exercise supervision over the wholesale and retail drug shops in the Civil and Military Station under the orders of the Collector, the cost of establishment being also proportionately adjusted annually between the two tracts.

The rules framed (copy enclosed) by the Resident under the Excise Act provide for the control of the growth of the Indian hemp plant from which ganja is prepared; there was no occasion to issue a license for its cultivation. The drug is easily imported by the licensed contractor from Vellore and Cocanada in the Madras Presidency. The Cocanada drug is much appreciated by the consumers in this province; better sales and greater revenue are effected by such drug. The bulk of the drug imported lately has been that of Vellore. Appendix N of the ganja rules gives a full description of the drugs known in this country as ganja, majum, and bhang used by consumers in Civil and Military Station. Charas is little known in this country.

(*a*) The system obtaining in the Civil and Military Station is briefly stated above. The chief executive officer is the Collector; the Resident is the chief controlling authority. Act XXII of 1881, as amended by subsequent enactments and the rules framed thereunder by the Resident, is the law on which the system is based.

(*b*) Wild hemp is scarcely grown in Civil and Military Station. Any plant found growing spontaneously is uprooted by the Excise officers and destroyed under the Collector's orders.

(*c*) The cultivation of the hemp plant in Civil and Military Station is interdicted, but there were two or three instances within the last seven years in which persons, in spite of Government order to stop the growth, allowed the growth of one or two plants in each case in the backyards of their houses and in the fence of their gardens. They were prosecuted and punished.

(*d*) The importer of the ganja drug is the contractor for Civil and Military Station. He is also the wholesale vendor. Whenever the contractor wants to lay in a stock according to the terms of his agreement, an import pass is issued by the Collector for the required quantity. This pass is produced by him before the executive revenue officer of the district from whence the drug is imported. He is thereafter allowed to purchase the drug to the extent permitted in the import pass. On the arrival of the consignment of the drugs in Civil and Military Station, the Government Head Supervisor verifies the quantity with the Collector's pass and then it is booked and stored in the Government warehouse. The daily issues by the wholesale to retail vendor are checked by the Excise officers.

(*e*) The wholesale and retail vendors are under the control of the officers of the Excise department. They are licensed; full details of the conditions and restrictions will be found in Appendices B, H, and I of the Ganja Rules.

(*f*) The tax or duty on ganja is levied through the licensed contractor. The contract generally extends for a period of three years at a time. Government duty is fixed at the rate of 6 annas for ganja and 2 annas for majum on a seer of 24 tolas. The contractor guarantees a fixed minimum annual revenue to Government which he is allowed to pay into Government treasury by twelve equal monthly instalments. If the sales in any month are found to realize more than the guaranteed revenue for that month, then an excess fee at the above rate is levied from the contractor; if deficient, the contractor will make good. He is, however, allowed credit for this deficiency in excess sales (if any) in any subsequent month within the same official year. Illicit smuggling of ganja tending to evasion of payment of duty is made punishable. All officers of police and municipality take precautions against smuggling; persons detected are prosecuted by the Excise executive officers before the magistracy.

(*g*) The sites for retail shops are fixed by the Collector in consultation with the District Superintendent of Police, who makes a local inquiry as to the complaints of

general public and other objections to the opening of the shop in a particular locality; the Collector's sanction will be based on the result of such inquiry.

They are not auctioned. No upset prices are fixed. The number is determined with reference to the area and population. The present number in the Civil and Military Station is 6. Nothing in the nature of "local option."

(*k*) The rates at which ganja is sold in Civil and Military Station to retail vendors by the Government contractor (wholesale vendor) are—

	As.	
Ganja	10	per seer of 24 tolas.
Majum	4	

The rates at which the vendors sell to consumers are—

	As.	
Ganja	13	per seer of 24 tolas.
Majum	6	

(*i*) The maximum amount sold to a consumer is limited to 5 tolas in one day; any quantity over this required for special purposes must be purchased under the Magistrate's pass. The prices are those fixed by Government (*vide k*). Sales over and below the fixed price are made punishable.

(*j*) The careful check placed by the officers of the Excise, Police, and Municipality prevents illicit cultivation, smuggling, and illicit sale. Such instances are rare in Civil and Military Station.

(*k*) No modification of the present system is under consideration.

(*l*) The following table shows the quantity of imports of drugs from the Madras districts, the sales, and the amount of revenue from 1886–87 (the year from which contract was separated from that of the Darbar) to 1892–93 :—

	Import.		Sales.		Government revenue.
	Mds. of 40 seers.	Seers of 24 tolas.	Mds.	Seers.	
					Rs.
1886-87	200	8	...		*2,200
1887-88	194	28	...		2,200
1888-89	206	14	...		2,200
1889-90	189	35	...		2,800
1890-91	198	30	...		2,800
1891-92	192	8	...		2,800
1892-93	168	35	...		3,000

* To these must be added the amount of revenue on excess sales up to 1891-92.

21st September 1893.

BARODA STATE.

MEMORANDUM.*

* * * * * *

22. Wild ganja is not to be found in this part of the country. It is neither cultivated nor does it grow spontaneously in any part of His Highness' dominions.

Wild ganja.

23. Charas is neither imported nor used by the people of this part of the country. Bawas and Atits who travel in Northern India sometimes bring charas with them, which is solely used by them.

Charas.

24. When I speak of ganja and bhang, I always mean flat ganja imported from Southern Maratha Country and bhang purchased in His Highness's territory or imported from Palanpur.

Ganja and bhang.

25. Chura is commonly known as *garda* in this part of the country. It is not imported in its original form, but assumes it in manipulation and in the process of packing. It is used in several preparations, of which I shall speak hereafter.

Chura.

26. The hemp drug is generally known in this part of the country as ganja and bhang. The consumers of ganja and bhang have given them different names and they are known by those names in different social circles.

The names by which the drug is locally known.

* * * * * *

32. In none of the districts of this State does the hemp plant grow spontaneously. There is no cultivation, so to say, of the hemp plant in the State except in one place, *viz.*, Bhadran of the Petlad taluka. It is generally from ten to twelve bighas annually.

Cultivation and growth of hemp.

33. The land adapted for bhang and ganja cultivation is what is called here goradu, a friable sandy loam. The first operations for cultivation are started in the month of March. The land is first ploughed generally three or four times and then freely manured with dung of cattle. When the rains set in and the land is perfectly saturated it is again ploughed and harrowed. The seeds are then sown from 4 to 5 seers per bigha. When the seedlings grow to the height of six inches they are rooted out and transplanted on the ridges made for the purpose. There they are allowed to remain for three or four months. During the interval the weeding process is continued and when the plants commence budding the male plants are removed, that the female tree may not bear fruits or seeds.

34. When the flowers are well developed the plants are cut and spread on the ground where they are allowed to remain to be softened by the nocturnal dews.

35. Early in the morning the treading process is carried on till noon, continuing to do so till the flowers with young tops assume a flat shape.

36. This is the process adopted by the cultivators for manufacturing flat ganja, the older leaves and fruit vessels being bhang. The yield per bigha of ganja is 8 to 10 maunds and bhang 8 to 12 maunds

37. The hemp plant can be grown in any part of His Highness's territory with advantage: the conditions of climate, soil, rainfall are favourably adapted to the growth of the plant. It is thus found in the compounds of sadhus, fakirs, and other people who consume ganja or bhang.

38. It is said that this plant was sown largely in various places. But the restriction placed by the British Government on exportation obliged the cultivator to give up cultivation. It is now cultivated in one village, Bhadran, where bhang is made for home consumption. No narcotic hemp is cultivated either for the production of charas or its flowers and seeds. The cultivators are an ordinary class of Kunbis.

39. The following is the extent of the cultivation of bhang and its annual yield for the last six years:—

Years.	Extent in bighas.	Yield in maunds.
1888	6 15 9	50
1889	12 11 13	125
1890	12 17 3	130
1891	.....	.....
1892	0 17 1	10
1893	9 14 6	68

* Extract.

40. Two pounds of the home-bred bhang is herewith sent as a specimen for favour of being forwarded to the Secretary, Indian Hemp Drugs Commission.

41. Bhang is the only product prepared in this State. Various other preparations are made from ganja, garda, and bhang. They were formerly made by the Tambolis and the Gandhis, but at present prepared by the license holder.

Preparation and manufacture.

* * * * * *

55. Before February 1892 there were no restrictions placed either on the importation or exportation of bhang and ganja, the importer had but to pay the customs duty.

56. The number of shops was not fixed nor was the sale or export regulated. Everybody on payment of import duty was free to deal in the drug as he pleased. Hence the quantity disposed of in home consumption and quantity exported cannot be ascertained.

57. Ganja and bhang were then sold in every shop of the Gandhi and Tamboli, except in places where the bhang and ganja were much used. In such places the right of selling these drugs was leased out to the highest bidder and large consumption was thus brought partly under control and excessive use restricted.

58. A large quantity of bhang and ganja was then exported from His Highness' territory by traders to the surrounding Native States and much profit was made by them.

59. The export trade has now become extinct since the publication of the Notification No. 10, dated 10th December 1891, which put a stop to importation or exportation by any person other than licensed vendor for each division.

60. Bhang and ganja which appeared in every shop of the Gandhi and Tamboli are now only sold in the shops licensed for the purpose.

61. The number of shops in each division is fixed and the sale of bhang and ganja is regulated.

62. The following translation of the agreement will give a better idea of the restrictions placed upon the sale and manufacture of bhang and ganja by the Government farmer:—

"I pass this agreement in writing that my tender for the exclusive right of selling bhang, ganja, and the preparations thereof at the appointed shops, a list of which is herewith annexed in all the talukas of the Prant, for a period of three years from 1st August 1893 to 31st July 1896, is accepted on condition of my paying into the Government treasury an annual sum of Rs. ——— British currency, I bind myself to act according to the terms of the agreement mentioned below.

2. The following are the instalments by which the amount of the izara, namely, the sum of Rs. ——— British is to be paid to Government:—

I shall pay to Government the sum of Rs. ——— British annually, being the amount of the instalments aforesaid within the 15th of next month of the instalments falling due. If I shall fail to pay within the said dates, I shall pay interest at the rate of 6¼ per cent. per annum on the amount of the instalment from the day next after the one on which it falls due. If the interest and the amount due be not paid in due time, Government are at liberty to recover them according to the rules for the recovery of arrears of land revenue and annul the contract.

3. I shall not be entitled to compensation if any loss is incurred by the failure of season or any other causes. The responsibility of the loss rests on my head, nor shall I claim any remission from the amount of the izara on account of such loss.

4. I shall open shops at such places as are mentioned in the list or at places which shall be fixed by the Subha of the district. I shall keep such shops open from sunrise till 9 o'clock P.M. I shall open and maintain new shops and close existing shops as may be required. I shall not complain of any loss that may accrue by such proceedings.

5. As I have farmed the right of selling bhang, ganja, and the preparations thereof, I shall make my own arrangements for procuring them. I shall not purchase these articles from persons who do not possess a license from this Government for selling them other than the cultivators of bhang and ganja in this State. In case I have occasion to import or export these articles into or from foreign territory, I shall import or export them in accordance with the rules laid down in Notification No. 10, dated 10th December 1891. I shall keep in store such quantity of the articles as shall be directed by the Subha of the district.

6. If it shall be found necessary to store bhang, ganja, and the preparations thereof in one place, I shall store them in such a place of depôt as shall be fixed by the Subha of the district. Articles issued from such a place of depôt for retail sale shall be removed and transported under a permit from the Subha or such other officer as authorized by the Subha to grant such permits. I shall keep accounts of them for each sale in accordance with the annexed form A shown to me.

7. The Government are at liberty to destroy such bhang, ganja, and other articles as are in the opinion of the Subha of the district injurious to the health of the consumers.

8. I shall not be entitled to claim the remaining stock of bhang, ganja, and the preparations thereof which shall remain at the expiration of the term of the farm or when it is annulled. Such balance shall be considered to be the property of Government, and the Subha of the district shall take it in his possession, and such portion of the bhang, ganja, and the preparations thereof thus taken in possession by the Subha, as is injurious to the health of the consumers shall be disposed of in accordance with the preceding clause 7, while the rest of the articles shall be made over to the new farmer at a price fixed by the Subha and the price thus adjusted shall be accepted by me.

9. I shall not sell bhang, ganja, and the preparations thereof at other shops or places than those already appointed.

10. I shall not sublet any shop or shops reserved for the sale of bhang, ganja, and the preparations thereof without permission of the Subha of the district. I shall not employ for the retail sale of bhang, ganja, and the preparations thereof any person, for whose employment I may not have previously received written sanction. I shall receive this sanction from the Subha of the district or from some other officer authorized by the Subha to grant such sanction before employing any person for retail sale.

11. I shall not, without permission of the Subha of the district, sell more than a seer of 40 tolas of ganja or the preparations thereof, or more than 2 seers of 40 tolas each of bhang or the preparations thereof, to any person in one day.

12. I shall not receive any articles other than cash, or keep anything in pledge in barter for bhang, ganja, or the preparations thereof. I shall sell bhang, ganja, and the preparations thereof for the money that is current in each place.

13. I shall not open any shops for the sale of bhang, ganja, or the preparations thereof, or make sale therein after 9 P.M. and before sunrise; nor shall I harbour any person of bad repute in the shops.

14. I shall not permit persons of notoriously bad charactor to resort to my shops, nor shall I permit gambling or disorderly conduct, or indecent behaviour therein. I shall forthwith give information to the nearest Magistrate or Police officer of any suspected persons resorting to my shops.

15. I shall have always fixed up in a prominent place at the entrance of my shops a signboard bearing the following inscription in legible characters in the vernacular language :—

'Licensed shop for the sale of bhang, ganja, and the preparations thereof.'

16. I shall keep daily accounts printed in form B bearing the seal and signature of the Subha of the district or the Vahivatdar of the taluka, and shall daily enter the amount of articles sold in it. Besides this I shall furnish on demand by the Subha of the district such other accounts, returns, and information respecting the dealings as the Subha may require.

17. I shall, on being asked by any officer authorized to do so, produce for inspection the license I have received as well as the bhang, ganja, and the preparations thereof in the shops or in the depôt, and the accounts kept in accordance with the rules in force.

18. I shall keep in possession the proper weights for selling bhang, ganja, and the preparations thereof, and get them stamped at my own expense and shall produce them for inspection on demand by any officer authorized to do so.

19. I shall receive the balance of bhang, ganja, and the preparations thereof in the possession of the previous farmer for the prices fixed by the Vahivatdars of the talukas and shall pay the prices to the Vahivatdars.

20. I shall pay the customs duty or any tax on bhang, ganja, and the preparations thereof that may have been or may hereafter be levied.

21. If I or my servants or agents shall violate the conditions of the agreement, I shall be liable to a fine which may extend to Rs. 200; if the fine be not paid, Government is at liberty to recover it as an arrear of land revenue. And if I or my servants or agents act in contravention of, or omit to act in accordance with, the conditions of the license, or the terms of the notification issued in this connection, I shall, in addition to our liability to criminal prosecution, be held responsible for any acts or omission unless and until I prove that due precautionary measures to prevent such commission or omission were adopted.

22. If I or my servants or agents shall violate any conditions of the license or the terms of the notification issued in this connection or be convicted of an offence under any law, the license shall be liable to be withdrawn.

23. If my farm is cancelled or if I fail to fulfil the conditions before its term expires, Government shall make such arrangements as it thinks best; I shall make good any loss which Government may incur by such proceedings without being entitled to any compensation.

24. When the farm is thus annulled, all the bhang, ganja, and the preparations thereof remaining unsold shall be made over to the Subha, and shall be duly disposed of by him, and the vessels, packages, and conveyances which may have been seized shall be returned to me within two months after I shall have made good the whole loss.

25. If I fail to carry out the farm before its term expires according to the conditions of the agreement, I shall pay from my own property any sum that may be found to be due from me; and if this sum cannot be recovered from me, Government are at liberty to recover it from the amount deposited by me.

26. I shall deposit in the Government treasury a sum of 15 per cent. on the amount of the izara.

27. In case of any dispute which cannot be settled by a reference to these terms, I agree to any settlement that may be arrived at by a reference to the rules of auction sales in force."

63. The following statement will show the number of shops fixed and the number of shops opened by the farmers :—

	Number of shops fixed.	Number of shops opened.
Baroda	124	51
Kadi	95	18
Navsari	27	20
Amreli	12	12
* * * * *		*

69. The use of bhang and ganja is on the decrease in the State as will be clear from the quantity imported for sale during the last five years in each division, the reason for the decrease being increase in the price of these drugs.

70. The following is the quantity imported in all the divisions for the last five years :—

Divisions.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.
Baroda	1,237	1,265	1,183	1,133	430
Kadi	1,011	705	1,054	1,054	527
Amreli	591	385	642	220	262
Navsari	37	41	15	20	12

71. Since the introduction of the new system, the sale has very much fallen off on account of the rise in the price of bhang and ganja. Before introduction of the present measure, ganja was sold 4 tolas per pice, and now it is below one tola. Bhang was sold then 8 tolas per pice and it is now sold two tolas per pice.

72. Several persons have deposed in the course of the inquiry that the bhang and ganja have become dearer than what they were before, and that they are therefore consuming less than before, a fact not to be lost sight of that heavy duty on intoxicants lessens the consumption—a safer course to be adopted than total prohibition.

* * * * * *

Administration, taxation, and control.

165. There is no cultivation of hemp drugs in the Baroda State except in one place to a very small extent.

166. No restrictions are placed on cultivation, nor are they necessary, as cultivation has died out of itself for causes beyond the control of His Highness's Government.

167. However, there is a safeguard provided that in case of any cultivation, the produce should be sold to none but the Government farmer.

168. The administration in regard to the import, export, and sale of bhang and ganja is based on the Notification No. 10, dated 10th December 1891. A translation in English is given below for easy reference, and for fully understanding the rules in force—

NOTIFICATION No. 10.

"By order of His Highness the Maharaja Saheb it is hereby notified that, whereas there is no restriction at present in the State as regards the places in which and the prices at which bhang, ganja, and the preparations thereof should be sold, and there is consequently a likelihood of these articles being misused, and whereas Government is anxious to prevent such misuse, it is hereby enacted as follows:—

"2. That except those persons who cultivate bhang or ganja in this State, no person shall without permission of the Subha, have in his possession, or in any place, more than a seer of 40 tolas of ganja or the preparations thereof, or more than 4 seers of 40 tolas of bhang or the preparations thereof.

"3. That except those who cultivate bhang or ganja in this State, and those persons or their agents who may have been licensed by the Subha to sell bhang, ganja, or the preparations thereof, no person shall sell the aforesaid articles.

"4. Cultivators of bhang and ganja in this State are permitted by the last preceding clause to sell bhang, ganja, or the preparations thereof. But these articles shall be sold only to those persons who shall have been licensed by the Subha to sell them, and to no other persons.

"5. Any person desirous of having in his possession, or of transporting from one place to another in this State, a larger amount of bhang, ganja, or the preparations thereof than what is permitted by the preceding clause shall obtain a license from the Subha for so doing.

"6. Any person cultivating bhang or ganja, who sells bhang, ganja, or the preparations thereof to persons other than the licensees, or any person who possesses without a license from the Subha more than a seer of ganja or the preparations thereof, or more than 4 seers of bhang or the preparations thereof, or who sells without a license from the Subha, bhang or ganja, or the preparations thereof, or transports them from one place to another in this State without a license from the Subha, shall on conviction before a Magistrate be liable to be punished with fine which may extend to Rs. 200 or with simple imprisonment for a term which may extend to three months; and the articles seized (that is bhang, ganja, or the preparations thereof) shall also be liable to confiscation.

"7. Inamdars, jaghirdars, and other hakdars, who may be in the enjoyment of the rights of possessing, selling, or causing to be sold, bhang, ganja, or the preparations thereof, and who may suffer loss by the withholding of those rights, shall lay their claims for compensation before the Subha within one year from the date of this notification.

"8. Any officer of the departments of Police, Revenue, Customs, Abkari, Opium, and Forest may detain and search, in any open place or on the public roads any person whom he has reason to believe to be guilty of an offence under the preceding clause 6. When the search is to be made by entering a building, it may be done by a police officer not inferior in rank to a Naib Fouzdar, or by an officer of Revenue, Customs, Abkari, Opium, and Forest departments, superior in rank to a Karkoon, or by any other person authorized by the Subha in this behalf.

"9. Any offence committed under the preceding clause 6 by any person shall be inquired into by any police officer not inferior in rank to a Naib Fouzdar, or any officer of the Departments of Revenue, Customs, Abkari, Opium, and Forest, superior in rank to a Karkoon.

"10. Any Magistrate convicting an offender under the terms of this notification may grant to any person who has contributed to the arrest and conviction of the offender a reward not exceeding one-fourth of the realized amount of the fine imposed, or the value of the articles confiscated in the case.

"11. Nothing contained in this notification shall be deemed to affect the right of medical practitioners, chemists, or druggists or vendors of medical preparations, to prepare, sell, or supply bhang, ganja, or the preparations thereof for *bona fide* medical purposes.

"12. This notification shall come into force on the 1st of February 1892."

169. Importation and sale of this drug is, I can say, a State monopoly since February 1892.

170. Previous to the introduction of the monopoly system, everybody was at liberty to import bhang and ganja on payment of customs duty, except at large places, which were leased out to the highest bidder. Exportation of bhang and ganja was not restricted, nor was home consumption regulated. Every street had its own shop and anybody could sell it with impunity.

171. With a view to introduce better reforms and to bring the sale of the drug under the Government control in order to restrict importation and sale, the State monopoly was introduced.

172. The chief control in regard to these drugs now rests with the divisional Subha assisted by the Abkari Superintendent, who has a number of Inspectors under him, to supervise the licensed shops, and to prevent commission of offences connected with the illicit importation or sale of the drug.

173. The Sir Subha is the chief central authority who leases out the right of vending and examines annually the divisional administration carried on by the Subha.

174. The farm for sale of the drug is either given for a year or three years. The following are the figures for the four divisions:—

Prants.	(British.) Rs.	A.	P.
Baroda	6,051	0	0
Kadi	3,580	10	4
Navsari	2,026	0	0
Amreli	1,501	0	0

175. Government farmer alone now imports the drug on payment of customs duty besides the amount shown above.

176. He sells the drug at the fixed number of shops by his agency, approved of by the Subha, and makes preparation from the drug at licensed places.

177. The imported drug is stored at depôts appointed by the Subha, and the drug in transit by the farmer through His Highness's territory has to be covered by a permit signed by officer authorized in that behalf.

178. Neither shops nor depôts can be increased without the permission of the Subha. Such permission is not granted until indispensable necessity is made out for opening a new shop or depôt.

179. The number of retail shops is fixed by the Huzur. The guiding principle in fixing the number is the requirements of these drugs at places rather than area or population. Though there is no local option ascertained before opening shops, yet they are not forced upon the people.

180. The terms of the above notification will clearly show that there is a constant supervision over the importation and sale, whether licit or illicit, by all the departments of the State, and there is a cordon of Nakas on the frontier which minimize the evils of illicit ingress or egress of these drugs.

181. With all these excellent arrangements of control, the object in view of checking the excessive use of these drugs is nullified by the clause in the said notification, rendering possession of one seer of ganja or preparations thereof, or four seers of bhang or preparations thereof, lawful. The object was a laudable one, inasmuch as it was studiously inserted to soften the severity of the measure, having had bitter experience of hardship entailed by the Opium Rules. But the object was frustrated by the cheap sales of the drug in the surrounding Native States, flooding His Highness's territory with their narcotic articles and allowing opportunities for excessive indulgence.

182. The first modification that is necessary is to make the possession of ganja over ten tolas or preparation thereof, or half a seer of bhang or preparation thereof, unlawful. This modification will not much go to prevent illicit importation of the drug as long as surrounding Native States will continue to sell cheap ganja and bhang.

183. With all these hindrances in the way placed by the cheap sale of the drug in the surrounding Native States, the new measure has been productive of anxiously looked for results. The consumption of the drug has begun to fall off (*vide* statement B*), giving figures of importation with the amount of revenue realized therefrom. The rise in the price has induced people to reduce their allowance, and though the number of consumers is, as it is said, not reduced, yet the quantity consumed is very much decreased.

184. The present measure is too young to give any decided opinion or suggest any modifications. The object of all such modifications are more or less defeated by the want of co-operation of the surrounding Native States.

185. The system of taxation on these drugs can be summed up in a few words, *viz.*, customs duty *plus* the amount realized from the sale of sole right to vend.

186. This taxation has in certain places increased the price four-fold and in others six-fold than what was sold before the introduction of the new measure, and the consumption has fallen off *wonderfully*. All this may not be due to the new measure, and although excessive indulgence in the drug be still a constant factor, yet the past result gives a promise of a future happy augury.

187. It is said that a sudden rise in the price of liquor has driven people to consume ganja in certain places. How much truth there is in this allegation, cannot be determined, but granting it to be true, the Government has no reason to deplore as the havocs committed by alcohol are more fearful than those of narcotics. I, therefore, suggest no modification in the mode of taxation or its incidence on any of the intoxicants.

188. There is only one shop in Baroda where bhang in liquid form is drunk on the premises. There are no such shops anywhere else. I see no objection to the opening of such shops as exposure to public view, and the heavy price of the drug particularly charged at such places check excessive consumption much better than when done in solitude.

189. In conclusion, I beg most respectfully to state that I have done what I could do during the short time that was allotted to me. The magnitude of the task of collecting information from those who are particularly sensitive when questioned about their mode of life and their habits, and the hot haste with which the work was to be gone through, will, I am sure, induce you to look with a great indulgence on any defects that may have crept in. The humble effort made by me in this connection, if only meet with your approval, will be the ample reward for the pains that I have taken during the last month and a half.

* Not printed.

MEMORANDUM BY MR. R. H. GUNION ON HEMP DRUGS IN CENTRAL INDIA.

1. The definitions given in Dr. Prain's report are generally accepted in this Agency. In some parts of the west Malwa and Guna agencies bhang is also called *rijaya, buti, and sabzi.* In Bhopawar the name of bhang is given not only to the dry, but to the green leaves of the hemp plant (which appear to be sometimes eaten as a vegetable), and also to the decoction made by boiling the flowering-tops of the hemp plant in fresh butter or sweet almond-oil. In Indore the male plant is called *hari* and the female *bhamgera.*

2. There appears to be no spontaneous growth of the hemp plant in Central India. The plant is cultivated in the Indore State in the mahals that border on the Narbada for its fibre and for the production of ganja and bhang. None is cultivated for the production of charas. The fibre is got from a variety of the plant known locally as *san.* In the Indore State last year 193 bighas were under hemp cultivation. In Baghelkhand there is a limited cultivation of the plant for the production of ganja only. In the State of Dewas the hemp plant is cultivated for ganja (39 bighas) at one village and for bhang (9 bighas) at another. All over the Bhopawar Agency the plant is cultivated for bhang and ganja, rarely for charas; but the production is limited and, except in the parts adjoining British Nimar, only for the personal use of the cultivators. The plant is said to be extensively cultivated at Ujjain and Sipri, but unfortunately the Gwalior State has furnished no information.

3. In Indore and Dewas there is reported to be a slight decrease in the area under hemp cultivation. In Indore the decrease is said to be due to an increased consumption of liquor and in Dewas to the increased cultivation of hemp in Nimar.

4. As regards the method of cultivating the hemp plant, the Minister of Indore writes:—

A.—Ganja cultivation.

"The kind of soil most favourable is *rakhad*, which is usually white or light brown and near villages. Black soil is not considered specially fit for the growth of the hemp plant, but the plant thrives fairly well in black soil.

"Cowdung manure, with ashes where procurable, is mostly used. The average quantity per bigha is roughly ten cart-loads or 150 maunds.

"The ground is prepared in the usual manner by two or three ploughings and harrowing. The field is not divided into rectangles as for poppy cultivation.

"Three to five seers of seed per bigha is then sown by means of an instrument called 'sarta' in rows about twenty inches apart. The instrument is drawn by a pair of bullocks. The sowing is done some time after the rains set in, that is, in the months of July and August. The seed used for sowing is procured through experts. Every cultivator is not able to distinguish the quality and kind required. The hemp plants germinate about the fourth day, and about the sixth day green rows appear on the surface. If there is a gap in any row, fresh seed is sown. After about a month the spaces between the rows are scratched, with the object of providing sufficient earth round the roots of the plant, by means of an iron blade drawn by bullocks. The furrows are next cleared of weeds and the superfluous growth of the hemp plant is removed, so as to leave a space from six to ten inches between one plant and another. The greater the room the healthier is the growth of the plant. If the field is too weedy, the operation of weeding and cleaning has to be done a second time, and the scratching operation is performed four or five times to preserve the ridges. All male plants are then removed and female ones are only kept. The female plants do not bear flowers in the popular sense of the word, but put forth tops called ghugarees (flowering-tops), which appear two months after sowing. Any plant which does not bear healthy tops is removed, because, if allowed to remain, it is said to spoil the health of the neighbouring plants. The ganja field requires about three waterings after the cessation of the rains. Without these the crop is scanty and unhealthy. It is ready for collection in the month of November. The plants are not uprooted when ripe, but only the tops are cut off and gathered. When they begin to get sticky and look bright in the sunshine, it is a sure sign of the plant arriving at maturity.

"From the time of sowing to that of gathering weekly inspections are made of the field with the special object of removing inferior or unhealthy plants. It requires special knowledge to make this inspection and distinguish a superior from an inferior plant, and the work of inspection is entrusted to persons possessing practical experience of this matter, who are paid specially high remuneration—four annas a day and upwards.

B.—Bhang cultivation.

"When it is desired to obtain a crop of bhang from the hemp plant, a few male plants are retained at intervals to allow of impregnation and formation of seeds for the production of both ganja and bhang for the next year.

"I understand that in this State cultivators do not specially grow hemp for the sole purpose of obtaining a crop of bhang, which is got as an article subsidiary to the seed, to obtain which alone the cultivator seeks.

"The bhang ripens about the same time as ganja, but it requires no watering after the rains.

"While on this subject of methods of cultivation, I may remark that I am aware that Mr. E. T Atkinson, speaking of the ganja of the North-West Provinces, says in his Himalayan Districts, page 761, 'the pattar is imported chiefly from Holkar's territories and is of quality inferior to the Bengal ganja. It is purchased at from Rs. 5 to Rs. 6 a maund in Indore in the rough state, and pays a duty of about 4 annas per maund on exportation to British territories.'

"I am also aware of Dr. Watt's saying at page 116, volume II of his Dictionary on the Economic Products of India, that charas is obtained in Central India by causing men clad in leather aprons to run through the hemp fields, and that it is made in cakes and sold. Both these things are a matter of history; for my enquiries satisfy me that neither patter, nor charas is now produced, in this State at least.

"The average export of ganja annually does not exceed 377 maunds."

The method followed in Bhopawar is thus described by the Political Agent :—

"Hemp seed is sown in poppy or maize fields. When the plant is about 2½ feet high the main stem is split near the root and a piece of tile thrust in. This prevents the plant from setting seed freely, and makes the tops fit for ganja When particularly strong ganja is required each hemp plant is watered once with half a tola of opium dissolved in water. The cultivators believe that by transplanting the young plant into the mouth of a dead venomous snake (cobra preferred) the ganja becomes unusually strong.

"The best (strongest) ganja is obtained from plants growing in the shade and sparingly watered."

As regards Dewas, the Superintendent of the Senior Branch writes :—

"The seed of bhang is used for the growth of ganja. Two seers of seed are required for one bigha. The land in which the seed is to be sown is ploughed twice and then the seed is sown. Before sowing the seed, it is soaked in water for one night. The instrument with which the seed is sown is called 'sarota.' The plant springs up in four days. Within a fortnight it grows about two or three inches. The operation of weeding and thinning the plants then begins. This is done thrice. At this stage the operation called 'parkhai' (examination of the plant) is also conducted. The object of this 'parkhai' is to root out the bhang plant from amongst the ganja plants. If only one bhang plant is allowed to remain in the field, it has the effect of turning the whole field into bhang plants. The operation is continued until the ganja plant grows big enough. When the plant attains its full size, its flowers are cut with a sickle. At the time of cutting the flowers the juice that sticks to the instrument or the hand is collected and is called charas. The labourers who cut the flowers usually take away this charas for themselves.

"The seed of bhang is used for the growth of bhang. About two seers of seed are required for one bigah. The land in which the seed is to be sown is ploughed twice and then harrowed. Then a handful of bhang seed is taken and spread in the field. The land in which the seed is sown is harrowed once more. After four or five days the plant springs up. After a month the weeding and thinning of the plant commence. In the field of bhang, if a bhang plant named 'bhangria' grows it spoils the whole bhang field. The cultivators, therefore, root out this 'bhangria' plant from amongst the bhang plants. Within three or four months the bhang plant attains its full size. It is then cut with a sickle and spread in the field."

5. The cultivators of the hemp plant do not appear to form a special class in Central India, except in Rewah, where the cultivation is confined to Kachhis.

6. Opinions differ as to the special conditions necessary for the successful cultivation of the hemp plant. It is believed in Dewas that no soil in the State is suitable for the plant except that of the two villages, in which alone, as already stated, it is cultivated. The soil of those villages is said by the Superintendent to be "dry, stony, elevated, loam." The Political Agent in Bhopawar has seen ganja-producing hemp growing from near sea-level to an elevation of 4,000 feet.

7. It appears that in Central India the preparation or manufacture of the products of the hemp plant is carried on at the place of cultivation, and that the bhang and ganja sold in the bazars are in the state in which they left the cultivator. No charas is prepared in

Central India except a little in the Bhopawar Agency for the personal use of the cultivators, or for presents from them to religious mendicants. What charas is consumed in other parts of Central India is mostly imported from the Punjab. In the State of Indore about 900 maunds of ganja and bhang together are yearly manufactured. In Dewas territory the yearly output is 156 maunds of ganja and 64 maunds of bhang.

8. The Political Agent in Bhopawar thus describes the process of making ganja, bhang, majum, and charas :—

"Ganja is prepared by washing the dried tops well in water and rubbing them between the hands. It is here used only for smoking and is mixed with tobacco.

"Bhang is not here used for smoking. The green bhang is occasionally used as a vegetable, but ordinarily the dry bhang is used for the preparation of a beverage. The leaves are roasted in a copper vessel, spread out on moist ground, well washed till they have lost their colour, strained and finally powdered. The powder is taken in water, sometimes sweetened or with milk added; and it is common to add pepper, anise-seeds, rose flowers, lilac flowers, cucumber-seeds, almonds, or cardamoms.

"A special preparation is sold in the bazaars under the name of majum, which is an extract of bhang mixed with sugar and ghee and baked.

"Charas is prepared by rubbing ganja (sometimes mixed with bhang) violently for several hours on rough woollen blankets, which afterwards are scraped with a knife. The substance thus scraped off is first class charas. An inferior kind is then obtained by washing the blanket with the least possible quantity of water and then evaporating the liquid."

The Minister of Indore writes :—

"The crop gathered from the field is brought to the threshing-floor, over which it is evenly spread. Great care is taken to see that no earth or dust is allowed to mix with it. Rows of men consisting of the ryot's family and hired labourers tread the produce under foot so that the tops assume a flattened shape. This process is continued for three whole days. On the fourth day the tops are turned upside down and again trodden under foot for another period of three or four days. This process of turning and treading under foot is repeated three or four times. After the completion of this the tops are made into heaps, a foot and a quarter high. These heaps are then pressed by men under foot for about three or four hours. Next day two or three of these heaps are made into one large heap about breast high, and a regular series of such large heaps is then formed, and very closely covered up with stalks, leaves, etc., and heavy logs of wood or stones on the top. The article thus formed is ganja ready for sale.

"The round ganja is scarcely prepared in the State. This requires rolling under the foot instead of treading.

"Nearly the whole of the plant is cut, and all the plants so cut are stacked in the threshing floor. After allowing them to dry for a day or two, bunches of the plants are rubbed by the hand on the ground. The seed is then separated from the crushed leaves. The crushed leaves with tender twigs are called bhang, which is then ready for use."

The Dewas account is—

"When the ganja flowers are cut they are taken to the threshing floor. There they are trodden under feet until they are dried. While being thus trodden, the flowers are stripped of the leaves. The dried flowers form what is termed ganja.

"Ganja is prepared here simply for smoking purposes.

"When the bhang plant is cut and spread in the field, it is taken to the threshing floor. There it is beaten with a piece of wood. The leaves with seed become separated from the stalks, and they then form what is called bhang. This is the only preparation of bhang which is used for eating and drinking here."

9. All over Central India the cultivators of the hemp plant, where they are found, are also the manufacturers of bhang and ganja. The more luxurious preparations, such as majum, etc., are made by *Bhathiyaras* and confectioners. At Rutlam and elsewhere majum is also known as *aukoli*. Some witnesses think that none of the three products can be made from the wild plant. Others think that inferior bhang and ganja (not charas) can be made from the wild plant. In Jaora ganja made from the wild plant is said to be called *gorakhi* ganja.

10. There is a difference of opinion as to the time the three drugs will keep. Two years is the maximum for ganja and bhang and five years for charas. In Bhopawar bhang is supposed to lose its virtue after one monsoon and ganja and charas after one year; and this is said to be so well understood that the dealers burn or throw away their old stock when the new crop comes in.

11. Only two witnesses (both of Indore) report any other use of ganja than smoking it. One of them says it is used as a medicine both for men and cattle; the other says it is sometimes eaten with spices. Neither gives particulars. Charas is smoked only. The Thakur of Piplanda (in West Malwa) says that in his territory charas-smoking is punished.

12. Inveterate smokers of charas appear to be found only among the religious mendicants, fakirs, gosains, sadhus, and viragis. Most cultivators in Bhopawar smoke ganja occasionally; but nowhere else in Central India are the cultivators said to be ganja-smokers. The Indore Minister particularly says that the agricultural classes rarely use ganja. In the Baghelkhand, Bhopal, West Malwa, and Guna Agencies, the ganja-smokers (other than fakirs, etc.) are said to be chamars, mehters, and other low caste people. Some witnesses give figures. In Dewas about 1 per cent. of the population are said to be ganja-smokers. In Rutlam (population 89,160) there are said to be 500 ganja-smokers and 50 charas-smokers. In Indore it is supposed that 2 per cent. of the male population smoke ganja and that barely one in a thousand smokes charas. The smoking of both is generally more common in towns than in villages. In Charkhari (Bundelkhand) all sadhus, etc., 30 per cent. of the low caste people, and 5 per cent. of the rest of the population are said to smoke ganja.

13. The flat ("chapta") variety is the only ganja generally used in Central India. In Indore it is called *hari*. The Superintendent of the Sehore Bazaar says that chur is cheaper and that poor people sometimes use it for bhang.

14. The little charas that is used in Malwa comes mostly from the Punjab or the North-West Provinces, being imported by Vilayatis or Afghans. What is used in Rewah comes mostly from Patna. It is only in Bhopawar that there is any manufacture of charas, and there, as has been already said, it is prepared for personal use only.

15. In no part of Central India is bhang said to be used for smoking. Bhang is to some extent eaten and largely drunk all over the Agency. Some figures are given. In Indore 5 per cent. of the population are said to be drinkers and one in 5,000 eaters, of bhang. In Rutlam (population 89,160) 1,500 people are said to drink and 500 to eat bhang. The drinking of bhang is supposed to be common among all the higher castes of Hindus—Brahmans (especially those of Malwa), Banias and Rajputs—at times of rejoicing, and for a cool drink in the hot weather. Ujjain and Maheswar are mentioned by one of the Indore witnesses as places where bhang is largely drunk. In Charkhari bhang is said to be "eaten only by hardened drinkers of the drug." In the Dattia evidence it is said that the same people who would drink bhang in the hot weather would eat it in the cold whether or the rains. In Bhopal about 100,000 are said to use one or other of the hemp drugs; charas being expensive is said to be the least used of the three.

16. Taking Central India as a whole, the use of hemp drugs appears to be either stationary or on the decrease. In Rutlam the decrease is said to be due to the fact that the use of the drugs is disreputable; in Rewah to the fact that the drugs, being imported, are dear; and in Indore the Minister thinks that the clear decrease is due to the increased use of cheap adulterated liquor.

17. Occasional consumers of ganja are very rare and occasional consumers of bhang are very common. It is reckoned both for Indore and Dewas that 90 per cent. of those who use bhang or ganja are habitual moderate consumers, and 10 per cent. habitual excessive consumers. The habitual excessive consumers of ganja are almost all religious mendicants. The use of ganja by such men is said to enable them to endure abstinence from food and water, and also to resist malaria. Apart from its use by religious mendicants, ganja is largely used by labourers and by the lower orders of domestic servants. It is more easily prepared than bhang, and it produces a more immediate intoxication. The habitual use of bhang is said to be common among Pujaris and Brahman priests; otherwise bhang is a luxury of the well-to-do Hindu. Sometimes it is taken merely as an appetiser. A dose of it is supposed to enable a man to concentrate his faculties. It is largely used by Hindu jewellers, by whom it is supposed to steady the eye.

18. The average allowance and its cost for bhang and ganja respectively are very variously stated. In Indore the habitual moderate allowance per diem is said to be half a tola, costing one pice; and the habitual excessive allowance one tola and a half, costing three pice. In Dewas the habitual moderate allowance is said to be one tola, costing three pies, and the habitual excessive allowance *twelve* tolas, costing three annas. In Indore the habitual moderate drinker of bhang is said to take three tolas, costing half an anna, every day; in Dewas the dose is said to vary from one tola, costing half a pie, to four tolas, costing two pies. In Bhopawar habitual moderate consumers of bhang are said to take daily a quarter of a tola which, with the various admixtures, costs one anna; while excessive consumers take as much as five tolas, the cost of which, with admixtures, is eight annas. In Charkhari two tolas of bhang are said to cost one anna, the same being the price of one tola of ganja.

19. Ganja is smoked along with tobacco, the object of the mixture being, according to some, to bring out the full effect of the ganja, and, according to others, to mitigate its bad odour. The method of using the drugs in Bhopawar is thus described:—

Ganja is for smoking mixed only with tobacco.

Charas is generally put on the top of the filled hookah (five to twenty grains weight).

Pepper, anise-seed, cucumber seed, almonds, cardamoms, rose leaves, lilac flowers, are all classed as "bhang massala," but ordinarily only the first two are used. Bhang is also taken with milk and sugar or boiled in milk. An infusion of one to two scruples in two or three

small teacups full of water taken in three doses during the day is an efficient remedy in cases of painful gonorrhœa. Bhang tel, commonly called bhang, is a decoction of bhang in fresh butter or sweet almond-oil. It is a powerful narcotic.

The Indore use of ganja and bhang is thus described by the Minister—

"Ganja is prepared for smoking in the following simple manner:—

"For each smoker about half a tola is taken each time. Any seed or large leaf or coarse fibre is carefully removed. The ganja is then soaked in water and placed on the palm of the hand. Some water is then poured upon it and the ganja frequently rubbed and pressed by means of the thumb of the other hand until the whole water is squeezed out. This process is repeated about a score of times until the water squeezed out is perfectly colourless. Tobacco to the extent of half the quantity of ganja is then added, and the mixture, with the water completely squeezed out, is then put in into a chilum (smoking earthen bowl) and ignited by means of a live ember, generally of cowdung cake, put over it. The bowl is wrapped in a wet piece of cloth and applied to the mouth for the purpose of smoking.

"Bhang is prepared in several ways. The habitual, inveterate bhang-drinkers prepare it in the following way:—

"To a moderate drinker three tolas of bhang is required. It is carefully cleaned, and kept in water for some time, varying from a few minutes to half an hour. It is then washed several times, and with the addition of five or six pepper seeds reduced to the finest pulpy state over a flat stone by means of a muller worked by the hands. The pulp is mixed with about a pound of water and the mixture strained through a piece of cloth. The mixture is then poured from one pot into another many times. The number of times this is done and the height from which the mixture is poured is a very essential feature in the preparation. The drinker believes that the potency of the mixture increases in the direct ratio of the repetitions and the height. The mixture thus obtained is ready for use by the bhang *habitué*, who never takes it without first offering to Shiv and pouring some of it over a lingam where one is at hand. There is no end to the ways in which bhang is drunk as a luxury and as a cooling drink. Sugar and milk are added in most instances. Dry rosebuds, poppy-seeds, almonds, cardamoms, anise-seed, saffron, musk, nutmegs, cucumber seeds, pistachios, and a number of other spices, with juice of various kinds of fruit, are added to the preparation to make it palatable.

"Ganja is mostly neither eaten nor drunk, and bhang is never smoked nor eaten by itself. It is, however, the principal ingredient of several intoxicating preparations, such as gulkand, majum, yakuti, manohargutka, churans, bhajiyas, etc., and is eaten in the articles both on ordinary and festive occasions.

"The above answer refers to bhang and ganja obtained by cultivation only."

The spices usually combined with bhang are called bhang massala. The mixture of that name is sold in the bazar ready to be mixed with the bhang. The object of mixing dhatura with bhang is to increase the intoxication. A highly intoxicating compound known as punch-ratni, into which dhatura enters, is sometimes used in Indore.

20. The consumption of these drugs, so far as appears, is not practised specially in solitude or specially in company. Ganja-smoking in company is not uncommon, the pipe being passed round. The smoking of ganja is practically confined to adult males, and is most common among the middle aged and the old. Except among sadhus and gosains, women never use ganja. Bhang drinking also is very rare among women, though women and even children may take a little on holidays and festive occasions.

21. As to the ease with which the habit of using hemp drugs is formed and the difficulty of breaking it off there is great disagreement among the witnesses. The majority are of opinion that ganja-smoking is not easily learned and that a man can break himself of it without difficulty. It is said to be easier to give up either ganja or bhang than it is to give up opium or liquor. The tendency of the moderate habit to develop into the excessive is said to be more marked in the case of bhang than of ganja.

22. There do not appear to be any particular religious customs connected with the use of ganja. When sadhus meet they pass the pipe round, whatever the occasion of the meeting. The votaries of Mahadev are said to consider the use of hemp drugs a part of their religion. At Dewas Shaivas are said to make oblations of bhang on days sacred to Shiv, especially on Maha Shivratri; and when they have made their oblation they drink what remains. This use of bhang is occasional and temperate, and is not at all likely to lead to the formation of the habit. The same may be said of the social habit of drinking bhang on holidays and at marriages. This custom appears to prevail all over Central India, except perhaps in Baghelkhand. In that part of the Agency the greater part of the population are Vaishnavas, and the Baghelkhand witnesses in general have no good word to say for any of the hemp drugs.

23. No custom of worshiping the hemp plant is known in Central India. The only part of the Agency in which the use of all hemp drugs is said to be approved by public opinion is Bhopawar. In Malwa Rajputs, who are addicted to opium and drink, look down on people

who use ganja and bhang. But it is only the smoking of ganja that is distinctly regarded as disreputable. The social drinking of bhang, referred to in the last paragraph, is of course not regarded as in any way reprehensible.

24. It is generally agreed that for an habitual smoker to forego the use of ganja would be a serious privation. The habitual users of hemp drugs, and particularly ganja, are mostly ignorant and fanatical men. Among religious mendicants the habit of smoking ganja is hereditary and inveterate. Nothing can take the place of ganja to these men, and the deprivation of the drug that their order has used for so many centuries would, there is every reason to suppose, be a serious political danger. The matter of bhang is not so serious, its users belonging, as a rule, to a better class; but in this connexion it has been pointed out by more than one witness that both opium and drink are dearer than bhang; that Kshattriyas are the only twice-born Hindus to whom strong drink is not prohibited; and so that Brahmans, for instance, if they wanted an intoxicant, would take to opium; while Sudra users of hemp drugs, to whom strong drink is not forbidden, would not be able to afford it. On this point the Political Agent in Bhopawar writes:—

"Prohibition would probably be as ineffective as were the numerous attempts formerly made in all countries to prohibit the use of tobacco. The drug would certainly be consumed whether permitted or not. Interference would undoubtedly cause discontent, but any political danger would mainly arise from the opportunity afforded to the authorities for harassing the people. It is also possible that the Bhil tribes might show their resentment by open resistance. Witnesses are unanimously of opinion that prohibition would be an act of arbitrary injustice, and this would probably be the general popular feeling. The prohibition of ganja might lead to increased consumption of alcohol. The bhang-consuming classes generally disapprove of the use of alcohol, and would not be likely to take to it."

25. Generally speaking, there appears to be no reason to suppose that alcohol is to any extent taking the place at present of any of the hemp drugs. But the Indore Minister is of a different opinion.

26. In none of the States in Central India do there appear to be any restrictions on the manufacture or on the import and export of hemp drugs. Duties are charged on importation as on the other articles of merchandize. In some States the sale of the drugs is to some extent restricted. In Indore, as the Minister states, the wholesale dealer requires no license; there is no maximum limit to the quantity he may sell at a time, but there is a minimum limit, *viz.*, 60 seers. The right to sell the drugs in retail is farmed out by public auction, and the retail sale is confined to the farmer and his agents. At present the retail farmer has one shop of his own in the city, and fifteen tobacconists in the city and twenty-five more in the mofussil, sell the drugs as his agents, there being as a rule a shop at the head-quarters of every mahal. The only other state in which there appears to be any restriction on the sale of the drugs is Rewah, where the "contractors" (meaning apparently the wholesale importers) are said to pay a fixed duty and license fees to the State. Shops in which there is consumption on the premises are not mentioned as existing anywhere. In the State of Bhopal there is a licensed contractor for each pargana, who makes retail sales in his own shop and authorizes others to do so as his agents.

For Cantonments and Agency head-quarters very little information about the sale of hemp drugs is available. In Mhow there is one "sanctioned" shop, and the Cantonment Magistrate reports that the daily sale is only about four seers. In Nowgong cantonment the Abkari contractor holds a license to sell hemp drugs, for which he pays specially. In Nimach there is one licensed vendor, who is said to sell the drugs at 50 per cent. over the price in adjoining native territory. In Sehore bazaar there is one licensed shop. In the Indore Residency Bazaar the right to sell hemp drugs retail is a part of the abkari contract, supposed to be worth Rs. 20 a month.

INDORE STATE MEMORANDUM.

Control on the growth of hemp.

The cultivation of the hemp plant for the purpose of producing bhang, ganja and charas is so extremely limited in this State that there is no scope whatever for putting it under administrative control. The whole area under narcotic hemp plant cultivation is given in the appendix.* The figures given there show that the maximum area during the last twenty years was 354 bighas, minimum 66 bighas, and the average 181 bighas.

The cultivation is confined to a few mahals in the Nimar district, bordering on the Narbada, and in Sanwer a few miles to the north of Indore. Thus it will be seen that although the State puts no restriction on the cultivation, or controls it in any way whatever, the ryot has not found it to his advantage to grow it largely, although the plant is capable of thriving almost everywhere in the State.

There is no special rate of assessment charged on land under hemp cultivation ; but is determined solely by the quality of the soil, and is usually Rs. 7 to Rs. 8 a bigha.

No wild hemp is found in the State. Here or there a plant may be seen by road or river side or near the huts of fakirs, etc., due to the dropping of the hemp seed by consumers.

Manufacture.

The growth being thus limited the manufacture of ganja and bhang is necessarily so.

Importation and exportation.

Under the excise system prevalent in Indore, the import and export of the hemp drugs are not shown under a separate head denoting the hemp drugs, but are included under the general head of 'kirana' (*i. e.*, drugs, spices, etc.), and cannot therefore be accurately given. There is no doubt that the drugs are both imported into the State and exported from it, but not to that extent which would make it desirable to assign special heads in the State accounts to their traffic. As in the case of cultivation, so here there are no restrictions on either the importation or exportation of any of the hemp drugs. They can be imported or exported by any body to any extent without a license on the payment merely of the fixed duty. Practically the trade is so limited as not to require its regulation by the State. The importers of ganja and other drugs are generally the banias and there is no limit fixed to the storing and transport of these drugs, by them.

Sale.

The sale is either (1) wholesale or (2) retail.

No license is required for wholesale, and there is no maximum limit to the quantity a wholesale dealer may sell at a time. There is, however, a minimum limit, namely, 60 seers, prescribed by a regulation of the State below which the wholesale dealer may not sell on pain of liability to confiscation of his commodity and a fine up to Rs. 50 by the customs officer and to unlimited amount by the Darbar. The occasions on which the darbar have exercised its powers in this respect are very rare indeed, and have done so extremely moderately. The State prescribes no minimum or maximum price of sale, and the wholesale dealer may dispose of his ware at any price it may fetch.

The right to sell in retail is farmed out by public auction, and none but the leaseholder or his agents can make retail sales. The ijardar or leaseholder is at liberty to open any number of shops at any place which may be convenient to him. In practice, however, it is understood that he follows the advice of the customs officers of the State. As a matter of fact at present the retail farmer has only one shop of his own in the city of Indore, and has commissioned fifteen tobacco-sellers, to whom he sells a quantity not exceeding half a seer at an interval of two or three days, to sell for him. In the mofussil the contractor usually has one shop at the head-quarters of every mahal, making about forty shops in all in the districts. Although it cannot be said that the number of shops is determined deliberately with a view to area and population, it naturally adjusts itself to the demand, and therefore indirectly to area and population.

There is no such thing in the State as "local option," firstly, because the matter is so small as not to require any such measure being adopted by the State ; and, secondly, because the people themselves have never asked and have no need for it. The thing does not amount to an evil giving rise to complaints requiring a remedy.

The average amount of the retail contract for the last eleven years is Rs. 5, 140 per year. The law prescribes no limit, maximum or minimum, in point of quantity to the retail sales to, or possession by, a consumer. But it has fixed the rates of the retail sale of each of these drugs, which are as follows : ganja, at half a seer a rupee in Indore city and one seer a

* Not printed.

rupee in the mofussil, bhang at four seers a rupee throughout the State, and charas at five tolas a rupee throughout.

The probable yearly consumption of these drugs in the State may be about 200 maunds of ganja and an equal quantity of bhang, leaving charas quite out of account as being inappreciable. These figures are the result of a very rough calculation, and not based upon reliable statistics. Having regard, however, to the probable number of consumers and the quantity consumed by an average consumer, they appear to be approximately correct.

Duties.

Besides the amount realised from the ijara or monopoly of retail sale, which is Rs. 5,140 yearly on an average as stated before, there are two duties levied on these drugs known as "katati" or inward, and "bharati" or "nikasu" or outward. These terms include the import and the export duty proper, that is, the duty levied on goods brought into the State from, or sent out of the State to, foreign territory as well as the duty levied on goods transmitted from one mahal to another within the State itself at each mahal.

The "katati" and "bharati" are levied at the same rate at the place itself. But the rate varies in different districts, being maximum Rs. 3-12-0 per rás of 3 maunds or 120 seers and minimum annas 12 for ganja; maximum annas 15 for one rás and minimum annas 8 for bhang; and maximum Rs. 7-11-0 and minimum Rs. 5-8 per rás for charas.

The duties are levied at the Sayar nakas by which every merchandize must pass. Evasion to pay the duty is punishable with confiscation of the goods smuggled and a fine up to Rs. 50 by the customs officer, or to an unlimited amount by the Darbar. The temptation to smuggle is greatly checked by the smallness of the duty and by the comparatively heavy liability to punishment. An enormously excessive tax like that of Rs. 335 per maund levied in Bengal (see page 324, volume V of Dr. Watt's Dictionary) would, in the very nature of things, invite smuggling, whereas the small rates levied by Indore cannot be expected to operate in that direction.

There is still a reason to believe that these drugs are smuggled into the State from Ujjain; and from Sanowad they are possibly smuggled into the adjoining British territory or other Native States. Excepting at these two points, smuggling is seldom heard of.

Administration.

The central administrative power rests with the Darbar. The executive head of customs and excise for the Indore city and Indore zillah is the Muntazim Sayar and for the other zillahs the Subha of each zillah. The present excise system in respect to hemp drugs in theState, so far as it may be so called, is based upon a few standing circular orders promulgated by the Darbar in the State Gazette from time to time. Some of these have already been noticed in their proper places in this memorandum. The system is on the whole working fairly relatively to the importance of the interests involved and no modification of it is contemplated.

JEYPORE STATE MEMORANDUM.

(1) The hemp plant is grown here only for use as bhang. Its cultivation is not in any way controlled by the Raj.

(2) Ganja and charas are not manufactured here from the products of the hemp (bhang) plants. Both these drugs are imported from Hoshiarpur and the Punjab. Bhang of a quality superior to what is locally produced is also imported here to some extent.

The sale of bhang, charas, and ganja is not in any way controlled by the Raj. Anybody can, at any place, open shops for the sale of these drugs.

(3) Customs duty only is levied by the Raj on bhang, charas, and ganja.

The customs duty on the export and import of bhang as well as on its import into the capital city from the districts is Re. 1 per maund.

The "mapa" or inland customs duty on bhang is 4 annas per maund.

The customs duty on the import of charas is at Rs. 20 per maund and on that of ganja is at the rate of Rs. 4 per maund.

(*a*) No particular system is in existence here regarding the growth of the hemp plant or the sale of its products.

(*b*) Wild hemp is not found in abundance anywhere in the Jeypore territory. The hemp plant, whether wild or cultivated, is only used as bhang and not made to yield either charas or ganja.

About 10,000 maunds of bhang is produced in the Jeypore territory. No attempt is made here to control the possession or sale of this drug.

(*c*) The hemp plant is not at all cultivated here for the production of ganja or charas, but only for use as bhang. The cultivation of bhang plants in this part of the country is neither prohibited nor restricted to any particular locality.

(*d*) Charas is imported here by the Afghans and the Kabulis and ganja and bhang by native traders.

All imports into and exports from the British territory of bhang, charas, and ganja are covered under Government license, and when exported from other Native States, under the customs pass (rawana) of that State.

All goods allowed to pass into the territory after being examined by the customs chaukies, which are located at places where traffic is generally carried on.

Bhang is exported from here to other neighbouring Native States, but before allowing it to pass in any quantity, the Customs Department requires the intending exporter to give security that the drug will not be smuggled into any other place.

(*e*) The wholesale and retail vendors of bhang, charas, and ganja are not under any control, nor are they required to obtain license from the Raj.

(*f*) Besides the customs duty as mentioned in paragraph No. 3, no other tax is levied by the Raj on bhang, charas, or ganja.

(*g*) The number and sites of the retail shops of any of these drugs are neither fixed here by the Raj nor put to auction sale. The vendors are quite free to open shops anywhere they like in the territory.

(*h*) The Raj does not fix any rate at which the drug must be supplied by wholesale to retail vendors. The average retail price (to consumers) of bhang is Rs. 13 per maund, of ganja Rs. 25 per maund, and of charas of the first quality Rs. 160 per maund and of the second quality Rs. 100 per maund. These prices of the drugs do not differ much in different districts.

(*i*) Neither any maximum amount is fixed for retail sales to, or possession by, the ordinary consumer, nor any minimum price is fixed for the drugs.

(*j*) There is no reason to believe that smuggling of bhang, charas or ganja from other provinces or other Native States prevails here to any extent; and to prevent smuggling of all articles on which customs duty is due to the Raj, it is provided in the rules of the Customs Department that the smuggler, when detected, forfeits the goods smuggled.

The cultivation, possession, or sale of these drugs, however, is not in any way restricted by the Raj.

(*k*) No excise system in respect to hemp drugs exists in the Jeypore territory.

(*l*) It has been already stated that the hemp plant is grown here only for use as bhang; and as it is not cultivated here as a separate crop, but grown along with other crops, the extent of its cultivation cannot therefore be ascertained.

About 27 maunds of bhang is exported from the Jeypore territory and about 50 maunds of bhang is carried from one district to another within the Jeypore territory, and about 300 maunds are imported into the city from the districts and about 64 maunds are imported from abroad. Thus about 364 maunds of bhang is consumed in the city. The amount of consumption in the districts and the holdings of jagirdars and others cannot be ascertained.

About 54 maunds of ganja and about 129 maunds of charas are imported into this place; but as no further duty is levied on any of these drugs, if they are taken from one district to another, it cannot be said how much of the quantity imported is consumed in the city and how much of it is taken into the districts. Besides the Customs duty, no land revenue is derived by the Raj from the cultivation of the hemp (bhang) plant.

(*m*) There are no other points to be added to make the system complete and intelligible.

JODHPUR STATE MEMORANDUM.

The hemp plant does neither spontaneously nor to any great extent grow in Marwar, but in a few villages of the parganas of Jodhpur, Bali, Pali, Bilara, Merta, Sojat, Jaitaram, and Jaswantpura, where both the kharif and rabi crops are produced, the cultivators sow some seeds of bhang round the fields of onion, coriander, mustard, and "rijka" grass as well as round the dhurras (passages) of water in the winter season.

The growth of the plant is not controlled, but when it grows up, the leaves are cut down and dried in the summer season. Some of the seeds, which fall down on the ground at the harvest time, sprout up in the rainy season; in the beginning of winter they are also dried.

If there happens to be any ganja seed among those of the bhang it also germinates. When it is cut down it is kept separate, and the produce thus obtained is termed "makuria ganja," which is chiefly used by Samis and Jogis only, as it is of much inferior quality, and for the same reason it is not offered for sale.

The cultivation of the plant is neither permitted nor prohibited; the cultivators cultivate as they have been doing since long; but there are no separate fields of bhang or ganja, and they do not grow abundantly, and consequently there is neither any system of administration with regard to these drugs nor any system of restriction and control.

Charas is not at all prepared in this country.

As the local produce of bhang is hardly sufficient to meet the wants of the consumers this drug, as well as ganja and charas, are imported from other countries.

For the importation of ganja and charas a license is obtained from the Residency office, but a parwana from the Darbar is sufficient to import bhang.

The Darbar levies custom duties on the import, export, and transit of these drugs, and they are as given below:—

	Import duty per maund.	Export duty per maund.	Transit duty per maund.
Bhang	... 2 annas.	2 annas.	2 annas.
Ganja, Charas	... Rs. 4-8-0.	Rs. 4-8-0.	Rs. 3.

It may be mentioned that from the customs point of view, both ganja and charas are regarded as one and charged at the same rates.

The Government duty for the importation of ganja is said to be Rs. 2 per maund. The bhang goes duty free and is chiefly imported from Bhurtpur. Charas is brought from the contractors of Ajmere, who probably get it from Yarkand and Afghanistan. Ganja is mostly brought from Indore, and consequently it goes by the name of Indore ganja.

The required figures for the period preceding 1883-84 could not be available, as then there was no Customs Department, and a contract for the whole custom dues was given. A separate statement* gives the statistics for the period intervening between 1883-84 and 1892-93, so far as could be obtained from the Customs Department. The appended memorandum shows the total income derived thereby.

Name of the drug.	Import.		Export.		Transit.		Total.	
	Quantity.	Duty realized.	Quantity.	Duty realized.	Quantity.	Duty realized.	Quantity.	Duty realized.
	Md. S. Ch.	Rs. A. P.	Md. S. Ch.	Rs. A. P.	Md. S. Ch.	Rs. A. P.	Md. S. Ch.	Rs. A. P.
Bhang ...	492 3 12	61 8 3	83 38 2	10 8 0	.....	.....	576 1 14	72 0 3
Ganja ..., Charas ...	1,734 37 1½	7,364 5 1	11 31 11	52 3 3	122 36 13	368 11 3	1,869 25 9½	7,785 3 7

The total duty realized from bhang is Rs. 72-0-3 and that from ganja and charas together Rs. 7,785-3-7, thus giving on the aggregate a sum of Rs. 7,857-3-10.

With regard to the sale of these drugs, it is to be noted that in the towns of Jodhpur and Pali, where these drugs are consumed in a comparatively greater degree than in other towns

* Not printed.

of Marwar, probably on account of there being a greater population, a contract for the sale of bhang, ganja, and charas has since 1880 been given, which has brought an income of Rs. 14,047 to the Darbar. A parwana instead of a license is issued by the city Kotwal in Jodhpur and by the Hakim in Pali by auction to the highest bidder. It covers a period of nearly one year. Both the aforesaid authorities supervise and control the sale and punish the infringers of the contract.

In places other than Jodhpur and Pali, where there is a less demand and supply of these drugs, their possession and sale are not controlled, and no necessity has ever been felt for such control.

There are no retail vendors in Pali, but there are fourteen in Jodhpur, all of whom are under the control of the contractor, who himself has two shops within the town. The retail sellers are ordinary shopkeepers vending these drugs along with other articles. With reference to area and population, when and where they see any necessity for the same, they sell these drugs purchasing at a lump sum from the contractor.

The rates at which the drug is supplied by the contractor to the retail vendors and ordinary consumers are the following :—

	Supplied to retail vendors.	Supplied to ordinary consumers.
Marwari—		
Bhang	4 seers per rupee.	3 seers per rupee.
Ganja	3½ rupees per seer.	3½ rupees per seer.
Charas	7 rupees per seer.	8 rupees per seer.

No tax is imposed in this country except the duties alluded to above.

The average retail price to the consumers of bhang varies from two pies to nine pies, to those of ganja from one anna to three annas, and to those of charas from one anna to two annas.

It does not differ much in the different parganas.

There is no maximum amount fixed for retail sales to, or possession by the ordinary consumers; but as the consumers are not, generally speaking, well-to-do persons they do not keep more than two or three doses. There is no minimum price, the current rates having already been quoted.

No complaint of smuggling or of an illicit sale of these drugs has yet been brought to the notice of the Darbar. The kotwal of this city in Jodhpur and the hakim in Pali are, however, empowered to punish the smugglers and unauthorized vendors of the drugs.

Bhang, ganja, and charas are not under the control of the local Excise Department, and there are no modifications under the consideration of the ijlas.

As has already been stated, the appended statement gives the required statistics about these drugs, as far as the figures could be available from the records of the Darbar. The explanation of variations from year to year seems to be that these drugs are generally imported when either the stock is exhausted or when their rates are cheaper in the countries from where the contractors import them.

BIKANIR STATE MEMORANDUM.

Translation of a communication from the Revenue Department, Bikanir, dated the 31st December 1893.

The Council's Order, dated the 27th October 1893, enclosing papers regarding the trade in, and preparations of, hemp drugs were received, and copies were sent to the four nizamats for enquiry and report. The nazims of Bikanir, Sujangarh, and Suratgarh sent copies to their respective tahsildars. The nazim of Reni summoned the tahsildars of Bahaderan, Churu, and Rajgarh, also the excise contractors from the three tahsils, cultivators of bhang, etc., and recorded their depositions, and returned the papers with a brief report. The nazim of Sujangarh did not record any person's statement, but only submitted answers to the questions. His subordinate tahsildars did not give full answers to the questions. The tahsildar of Ratangarh has recorded the statements of four or five persons in connection with the questions. The tahsildar of Sujangarh has also written answers to some questions, but it is not known from whom he made enquiries. The tahsildars of Dungargarh and Sardarshahr wrote that no one could give answers to these questions in their respective tahsils. The nazim of Suratgarh has sent answers to the abbreviated series of twenty-three questions only by enquiring from some people, and has also sent a memorandum of his own. The tahsildar of Anupgarh reported that no one uses ganja, charas, or bhang in his district, and none could answer the questions. As regards the tahsils of Mirazawala and Hanumangarh the nazim states that from enquiries made from the tahsildars of the above tahsils and from the mahajans, etc., of Hanumangarh, it appeared that there are no persons who use bhang, charas, or ganja in either tahsil or who could give answers to the questions. There is no excise contractor in the nizamat except at Hanumangarh. There are no persons at Suratgarh itself who consume ganja and charas, but one or two bhang consumers were found and their replies were recorded. The nazim of Bikanir summoned the contractors and consumers of bhang, charas, and ganja and recorded their statements. From the replies received from the nizamats and from the experience and knowledge of this department the answers to the several questions have been written. It may also be noted that in the nizamat of Suratgarh there are many Raths who are Mahomedans, and the villages are inhabited by Jats and Sikhs, and all these do not use bhang, charas, or ganja. Only a very few persons use them here and there. There are consumers in the nizamats of Bikanir, Sujangarh, and Reni. Those who are allowed to drink liquor use very little bhang, though ganja and charas are used by some. The drugs are mostly used by Brahmins, Mahajans, Agarwals, Mahesris, and some Oswals, Sewaks, Chelas, and other miscellaneous castes. Saniyasi Jogis and Naths use them much, and their associates also consume them.

As regards paragraph 2 of the letter from the Secretary to the Hemp Drugs Commission regarding excise arrangements, it may be said that no proper excise arrangements existed before. The excise law and rules have only been framed this year and contain full information on the subject. One or more copies of the rules may be sent from the Council for the information of the Commission.

As regards paragraph 3 of the above letter it may be said that the excise arrangements have only been begun this year and have not yet properly come into force, and therefore no such memorandum can be prepared. The information wanted in the note will be given below.

As regards paragraph 4 of the letter which requires information for the past twenty years, it may be said that there were no rules and regulations previously. The duty was taken by the Customs Department, and hence this department can furnish no statistics.

NOTE.

(1) No bhang is grown in this State except at the village of Chani in the Bahaderan tahsil and at the town of Churu because the country is sandy and there are no means of irrigation. Bhang, charas and ganja cannot be grown without water. The cultivation of bhang at Churu was limited to one bigha of land and has ceased, because it did not prove profitable. The wells at Churu are not very deep, and bhang was sown with onions and tobacco. At Chani it is sown with onions and tobacco in three bigahs of land and is irrigated by the canal-water. There is no control over its growth. The profit is realized by the cultivators, who are at liberty to sell the produce to the excise contractors, but not to others.

(2) Bhang, charas and ganja are imported from the Punjab, Indore, Jeypore, and other places. Nothing is manufactured from them in this State except majum and powder. This is done by consumers and by the excise contractors for sale. There is no restriction. There are punishments for the breach of excise rules, and the consumers can have in their possession drugs up to the prescribed limit only.

(3) The system of taxation is one throughout the State, *viz.*, bhang Rs. 5 a maund and ganja and charas Rs. 20 per maund. Full information is given in the report of the Customs Department, dated the 27th October 1893 :—

(*a*) There is one uniform system in the whole State. The duty is levied by the Customs Department. The head of the Customs Department at Bikanir is the central controlling authority. In the mofussil there are thanas and customs offices at which duty is levied. There are Girdawars for inspection and check. The work of levying the duty at the customs offices is performed by daroghas, naib-daroghas, and thanadars, and these are all subordinate to the Customs Department. At the head-quarters of the nizamats the nazims are the officers of excise and issue licenses for wholesale and retail vend. In like manner at the tahsil head-quarters the several tahsildars and their naib do this duty in subordination to the nazims. All these nizamats and tahsils are under the control of the Revenue Department. Everything is done in accordance with the customs and excise regulations.

(*b*) Wild hemp does not grow in any part of this State, but, as stated in answer No. I, some bhang is grown in Chani from which no charas or ganja or any other preparation except bhang is made. The cultivators sell it to the contractors only and not to any one else; any infraction of the rule renders the seller liable to punishment.

(*c*) The cultivation of the hemp plant is not prohibited by law, but the land of this State is not fit for its cultivation and there are no means of irrigation. It is only grown in Chani. There is no restriction on the cultivation.

(*d*) Ganja, bhang, and charas are imported into the State by contractors and other traders from abroad who pay the customs duty and sell the drugs to the wholesale vendors. Section 18 of the Excise Rules permits any one to import for his own use bhang up to five seers, but he has to pay a duty of one anna a seer to the excise contractor and to obtain a permit. If any one brings in majum and gulkand prepared from bhang he has to pay one anna for every rupee's worth of the drug to the contractor and to obtain a permit. No licenses are issued by the raj for the importation of drugs. As regards the exportation of intoxicating drugs from the State, it is mentioned in the report of the Customs Department that, according to article 5 of the Treaty* with Government, the export of intoxicants is prohibited, and the exporters are punished according to law. If a trader wishes to export any portion of the drugs which he has imported, a permit is given to him by the tahsildar according to section 23 of the excise law. The tahsildar supervises the packing of the drugs and puts seals on the package, and after satisfying himself in every way he sends a duplicate copy of the permit to the officer of the place to which the drugs are to go.

* Salt Agreement.

(*e*) Control is exercised over the wholesale and retail vendors according to regulations, so that they may not sell more than the quantity allowed by the law. Sections 6 and 23 give details about this. Retail vendors cannot sell to one person at a time more than 120 tolas (1½ seers) of bhang or majum and other preparations of bhang and 40 tolas (½ seer) of charas and ganja, but on occasions of marriages, etc., he can sell more with permission. Neither wholesale nor retail vendors can keep and sell more than is permitted by law; licenses are given to them by the raj in the middle of the month of Chait, when the year commences. The wholesale vendors fix the number of shops and get licenses for the retail vendors, and they themselves are permitted to take licenses for retail vend. Supervision over them is exercised by the nazims, tahsildars, and daroghas. The forms of licenses are given in the excise law.

(*f*) Mention has been made in paragraph 2 of the levy of the tax on ganja, bhang, and charas. As a precaution against evasion of duty customs chaukies and thanas have been posted on the border, and smugglers are punished by fine and confiscation of the article smuggled. Officers of the Customs Department make tours to inspect the arrangements.

(*g*) The contracts for wholesale vend are sold by auction in the tahsils, and licenses are issued with the sanction of the Regency Council. The number and sites of the retail shops are determined by the nazims with reference to population and the amount of consumption. The shops for retail vend are not auctioned. The wishes of the population are also regarded in fixing the sites for shops. The contractor gets licenses for the retail vendors after fixing his prices. The retail vendors cannot sell at higher rates than those fixed by the nazims.

(*h*) The rates are entered in the licenses for wholesale and retail vend, and no one can sell cheaper or dearer than those rates which are fixed by the nazims. The retail prices differ a little in the various districts.

(*i*) According to section 23 of the excise law the maximum amount fixed for retail sales to, or possession by, an ordinary consumer is bhang 120 tolas and charas 40 tolas, and the fixing of the minimum prices rests with the nazims.

(*j*) Since the introduction of the excise rules this year, no case of smuggling has come to notice. At the time when the excise rules came into force, all the drugs were taken away from those who possessed them and were either confiscated or sold to wholesale vendors. As mentioned in (*f*) defaulters of customs duty are punished by fine and confiscation of the drug. Illicit sales and possession are punished according to section 34.

(*k*) None.

(*l*) As no records of past years exist, no explanation can be given of any differences and variations that have taken place in the cultivation, trade, etc., of the drugs. There was neither permission nor prohibition on the part of the raj, and everyone who chose used publicly to sell and buy. The customs duty only was taken in the raj. The present rules have come into force this year only and have not been fully carried out yet, and contracts have not yet been given everywhere, but illicit sales have been stopped. The statement cannot therefore be filled in. Statistics regarding the consumption and revenue cannot be prepared at present. The quantity imported can be ascertained from the Customs Department. Mention of cultivation has been made in (*b*), and regarding the importation of the drugs information is supplied in 2.

(*m*) Full details are contained in the excise law.

Translated.

CHAS. S. BAYLEY,
Political Agent, Bikanir.

Translation of a communication from the head of the Customs Department, Bikanir, dated 27th October 1893.

The Council's Order, dated the 17th October 1893, enclosing papers regarding the hemp drugs was received on the 21st idem. With reference to paragraphs 3 and 4 of the letter from the Secretary to the Indian Hemp Drugs Commission and the note mentioned in paragraph 3, I beg to state that the bhang, charas, and ganja plants do not grow either wild or by cultivation in this State, but the drugs are imported from foreign territory. No other preparations from bhang, ganja, or charas are made in this State for trading purposes, nor are they imported from other territory. On the Holi and other festivals majum is prepared from bhang and is sometimes sold retail. Bhang is pounded, mixed with milk and sugar and drunk. It is also eaten dry, in which case almonds, pistachios, etc., etc., are mixed with it. The charas imported into the State is of two kinds, *viz.*, (1) garwa, which is smoked with tobacco; its effect is immediate and strong; and (2) charas. This latter is also smoked in the same way, but its effect is less strong. The ganja is of one kind only. Prior to Sambat 1942 customs duty was levied at different rates on bhang, charas, and ganja. The system of levying the duty was also different at head-quarters and in the districts, *i.e.*, in the districts duty was realized by the tahsils, and at head-quarters by the Customs Department. The statistics for the past twenty years cannot be supplied in the prescribed form because no records exist from which the different rates of duty prevalent in different places, the amount of revenue, the quantity of the drugs imported, etc., could be ascertained. The Customs Department was reorganized in Sambat 1942, since which time bhang has been taxed at Rs. 5 per maund and ganja and charas at Rs. 20 per maund, and one system of realization of duty has been introduced for the whole State. The customs officials are under the control of the head of the department. The customs rules have been in force. Girdawars and Naib Girdawars have been appointed for inspection work. The rawanas of Sambat 1942 have been destroyed, but those from Sambat 1943 to 1949 are in existence, from which a statement showing the quantity of the drugs imported and the amount of revenue realized during the eight years has been prepared. It is submitted with this report. For Sambat 1942 the quantity imported has been shown in a lump. The tax on charas and ganja is levied at one rate; therefore in some rawanas the words "charas and ganja" have been used together, and hence information regarding the two drugs cannot be supplied separately. There was formerly no prohibition in this State, and no licenses for wholesale or retail vend were given; therefore the drugs were imported and sold without restriction. According to article 5 of the Agreement with the British Government the export from this State into British territory of intoxicating drugs was prohibited. Exporters were punished with confiscation of the drugs and fine and imprisonment according to rules framed in 1878. The punishment for the export of opium was different. But since the beginning of 1893 the excise law of the Darbar has been put in force under the supervision of the nazims and tahsildars, and the whole arrangement has been put under the control of the Revenue Department, from which information regarding the granting of licenses for wholesale and retail vend, the import and export of the drugs, and the opening of the shops, etc., can be obtained. The answers to the Secretary's questions can also be obtained

through the Revenue Department, and the form of statement may be filled up there also. It has been ascertained that some bhang is grown at the village of Chani in the Bahaderan tahsil by canal irrigation, and the Revenue Department can supply information regarding its cultivation and supervision.

Translated.

CHAS. S. BAYLEY,
Political Agent, Bikanir.

Statement showing the quantity of charas, ganja, and bhang imported into the State and the amount of duty realized from Sambat 1942 to 1949.

Statement No. 1.						Statement No. 2.		
Sambat.	Charas and Sulfa.	Ganja.	Charas and Ganja together.	Total.	Total amount of duty realized.	Bhang.	Total amount of duty realized.	Remarks.
	M. S. Ch.	M. S. Ch.	M. S. Ch.	M. S. Ch.	Rs. A. P.	M. S. Ch.	Rs. A. P.	
1942	...	...	...	43 25 8¼	...	52 29 2	...	
1943	15 27 0	0 0 3	1 19 7¼	17 6 10¼	...	185 37 10	...	
1944	19 14 0	0 1 10	6 10 0	25 25 10	...	126 8 10	...	
1945	6 5 5½	0 7 15	2 33 3	9 6 7½	...	145 5 5	...	
1946	24 29 7½	4 28 9	2 30 4	32 8 4¼	...	135 27 0	...	
1947	5 0 7½	2 0 2	1 0 12½	8 1 6	...	140 14 0	...	
1948	13 2 9	11 8 10	0 3 4	24 14 7	...	124 24 14	...	
1949	19 24 11	5 5 11	1 0 7	23 30 13	...	116 32 10	...	
Total ...	103 23 8½	23 12 12	15 17 5¾	183 39 2½	3,679 9 3	1,027 19 3	5,137 7 9	

CHAS. S. BAYLEY,
Political Agent, Bikanir.

ALWAR STATE MEMORANDUM.

There is no special arrangement in force in regard to the control of the growth of the hemp plant in this State. Ganja and charas are not produced here. The zemindars in some of the villages grow bhang either close to their wells or on the borders of their fields on a very limited scale. Here and there may be found wild plants of bhang, but it does not grow to any appreciable extent. The system obtaining in this State for the management of the excise administration of the hemp drugs is that the State grants the monopoly of the import and sale of drugs, including poppy and opium, to a contractor for a fixed period under certain stated terms. In September last the contract for drugs, including poppy and opium, was given for three years for Rs. 10,550. This sum has been ascertained from enquiry to include Rs. 9,000 on account of poppy and opium and the balance, Rs. 1,550, represents the income on account of excise duty on bhang, ganja, and charas. In addition to the excise duty, bhang is liable to pay octroi duty at ten annas per maund, while ganja and charas are exempt from octroi taxation. Ganja, it will be observed, is neither produced nor imported here. Charas is imported for consumption into the State to the extent of 6½ maunds annually, while the production of bhang in the State is almost sufficient for the requirements of the people. If at any time any small quantity is required over and above the local produce, it is obtained from elsewhere by the contractor under restrictions imposed on it in British territory or other Native States from which it is imported.

2. With these preliminary remarks, we proceed to discuss *seriatim* the points alluded to in the note which accompanied the letter from the Secretary to the Indian Hemp Drugs Commission on the subject:—

(*a*) There is a uniform system for the State. It is this: The contract for all the drugs, including poppy and opium, is given for a fixed sum and for a stated period to a contractor under certain terms agreed upon at the time of the contract. The State merely receives the contract money in fixed instalments, and makes no interference in the management which is left entirely in the hands of the contractor. The principal revenue officer of the State is supposed to be the central controlling authority, but the administration of the system is virtually carried on by the contractor for the time being. There is no Act or Regulation in force in regard to excise administration. The whole system is based on the few conditions agreed to by the contractor at the time of the contract.

(*b*) Wild hemp is not produced to an appreciable extent in this State and is not much used. No attempt has been made to control the possession or sale thereof.

(*c*) The hemp plant for the production of ganja and charas is not cultivated. Bhang, as already explained, is cultivated close to the wells and on the borders of the fields by a few zemindars, but its cultivation is not prohibited, nor is there any restriction as to the localities of cultivation.

(*d*) Ganja is not imported here, but bhang and charas are imported by the contractor according to requirements. He makes his own arrangements for their supervision and for controlling the storing and transport of these drugs.

(*e*) The State has granted the monopoly of the import and sale of these drugs to a contractor, who sublets the farm and issues licenses at his pleasure to the different shopkeepers in the several tahsils or other localities for the sale of drugs.

(*f*) No answer is needed. This system is explained elsewhere.

(*g*) The number and sites of retail shops are fixed by the contractor according to requirements without reference to the authorities. The licenses are granted by him to the retail shopkeepers on payment of a fee to be agreed upon between the parties. The number of shops is not determined with reference to area and population, nor is there anything in the nature of "local option."

(*h*) There is no rate fixed at which the drug must be supplied by the wholesale to retail vendors. The rates differ according to the demand and supply at different times. The present rates are given below:—

	Bhang. Rs.	Charas. Rs.
Wholesale price	5 per maund.	200 per maund.
Retail prices	8 „	280 „

The retail price does not differ much in different districts. It is almost the same everywhere.

(*i*) There is no maximum amount fixed for retail sales to, or possession by the ordinary consumer, who can buy and possess drugs sufficient for one month's consumption from a licensed vendor. He cannot, however, import them, nor can he buy them from any other but the licensed vendor. There is no minimum price fixed for the drugs.

(*j*) No estimate can be made of the extent smuggling from other provinces or other Native States prevails here. It is the business of the contractor to check smuggling, and when any cases are reported, the smugglers are arrested and, if found guilty, are punished and the illicit drug is confiscated. Bhang cultivated or grown in fields is either sold to the contractor, or the proprietor obtains a license from the former for its sale.

(*k*) No modifications of the present excise system in respect to hemp drugs are under consideration.

(*l*) The appended statement * will show as far as possible the extent of cultivation and trade, the sources of retail supply, the amount of consumption and the revenue of this State in respect to the hemp drugs.

MANGAL SINGH,
RAO GOPAL SINGH,
M. WAJID ALI,
BALMOKAND DAS,
Members of Council.

* Not printed.

Statistics relating to hemp drugs for the years 1873-74 to 1892-93 in the Bhurtpur State, Rajputana.

Year.	Total population of districts.	Consumption of hemp plant for manufacture.						Amount of imports from other provinces or states in maunds and seers.			Amount of exports to other provinces or states in maunds and seers.			Number of licenses for wholesale vend.				Number of licenses for retail vend.				Amount of license fees.				Amount of fixed duty.				Total revenue.				Quantity sold (retail).				Proportion per head of population, column 2 ÷ column 3.	Remarks.
		Area under cultivation.		Licenses for cultivation.		Duty.		Of ganja.	Of charas.	Of bhang.	Of ganja.	Of charas.	Of bhang.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	From ganja.	From charas.	From bhang.	From other preparations of the hemp plant.	From ganja.	From charas.	From bhang.	From other preparations of the hemp plant.	From ganja.	From charas.	From bhang.	From other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.		
		Bighas.	Pucca Bighas.	Number.	Number.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.																														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
						M. s.	M. s. c.	M. s. c.	M. s. c.	M. s.	M. s.	M. s. c.	M. s. c.	M. s.																											
1873-74	659,837	—	—	—	—	—	—	64 0 0	—	—	—	9 20 0	19 27 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1874-75	—	—	—	—	—	—	—	300 20 0	—	—	—	3 24 0	28 26 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1875-76	—	—	—	—	—	—	—	1,201 10 0	—	—	—	1 26 0	60 32 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1876-77	—	—	—	—	—	—	—	1,719 30 0	—	—	—	8 30 0	45 19 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1877-78	—	—	—	—	—	—	—	—	—	—	—	3 37 0	9 39 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1878-79	—	—	—	—	—	—	—	303 0 0	—	—	—	3 37 0	9 39 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1879-80	—	—	—	—	—	—	—	21 0 0	6 0 0	—	—	2 3 0	6 23 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1880-81	—	—	—	—	—	—	—	—	—	—	—	4 25 0	11 10 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1881-82	—	—	—	—	—	—	—	—	—	—	—	2 3 0	6 0 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1882-83	—	—	—	—	—	—	—	4 14 0	—	—	—	5 4 0	3 6 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1883-84	—	—	—	—	—	—	—	3 37 15	61 0 0	—	—	5 3 0	14 13 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1884-85	—	—	—	—	—	—	—	—	—	—	—	—	61 20 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1885-86	—	—	—	—	—	—	—	2 3 0	183 4 0	—	—	1 10 0	13 0 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1886-87	—	—	—	—	—	—	—	47 1 0	208 24 0	—	—	2 0 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1887-88	—	—	—	—	—	—	—	19 23 0	208 23 15	—	—	4 35 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1888-89	—	—	—	—	—	—	—	43 7 15	91 7 0	—	—	6 28 0	2 0 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1889-90	—	—	—	—	—	—	—	67 0 0	270 20 0	—	—	30 25 0	0 1 15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1890-91	—	—	—	—	—	—	—	31 28 0	247 1 0	—	—	2 33 15	0 24 12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1891-92	—	—	—	—	—	—	—	38 25 1	455 33 0	—	—	1 30 0	6 22 15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1892-93	—	—	—	—	—	—	—	60 16 7	302 39 1	—	—	2 26 4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
								91 19 0	108 7 0	—	—	4 26 16	7 24 13 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	—	—	—	—	—	—	—	460 27 15	3,020 11 0	—	—	84 20 7	254 13 0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

KOTAH STATE MEMORANDUM.

Letter No. 3772, dated 25th September 1893, of the Agent to the Governor-General in Rajputana, together with its enclosure, reached me. In reply to paragraph 2 it is stated that very little ganja and bhang are cultivated in this State and their consumption is very little, hence it would not be necessary to send anybody from here to appear before the Commission as witness.

The questions of the Commission are answered as below :—

There is no supervision of the State on the production of ganja and bhang.

No ganja or bhang is made in this State; a very small quantity of bhang grows here, which is consumed locally. It is imported from other parts of the country.

Ganja is imported from Jhallawar, Gwalior, and Tonk.

No duty is levied on bhang which grows in this State; but when it is imported into the Kotah city a duty of Re. 1 per maund is levied like the articles imported from foreign country and the transit duty is charged 8 annas per maund.

A duty of Re. 1 per maund, like bhang, is levied on ganja when imported from other country.

The transit duty is the same as for bhang. If charas is imported the duty is charged at the rate of one anna per rupee on its price. No charas grows here, nor is it made.

Ten years before charas used to be imported here, but since then no import is made.

There are two kinds of bhang, *viz.*, "Deshi" and "Ujjaini." The colour of *deshi* bhang is green and that of Ujjaini yellow and grey. It is more intoxicating than *deshi* bhang.

There are two kinds of ganja, *viz.*, "deshi" and "baluchar."

As far as it has been ascertained the baluchar ganja is known here only by name. It is neither imported nor consumed here.

These are the following answers to the questions asked for :—

A very small quantity of ganja and bhang is consumed in this State, and on account of their less demand the State has only ordinary supervision in the district by nazims and in the city by the Revenue Superintendent.

There is a ruling of 1881 about buying, selling, and possessing intoxicating drugs, but on account of the above reasons it is not in force. As far as it has been ascertained, no wild bhang grows here, nor is it used in medicines; consequently there is no supervision.

There is no regular cultivation of ganja and bhang in this State on any piece of land. Some seeds only are thrown in the cultivation of poppy, where they grow up. Some "majum" is made out of that bhang, and there is no restriction about keeping this, because people here give preference to opium, which grows so freely and abundantly. Neither is there any permission nor prohibition to the cultivation of ganja and bhang: the cultivation is not made on any special piece of land, nor is there any special body who import these drugs; for this reason there is no rule to grant licenses for the same. Everybody can import and export ganja and bhang, but no one can sell them with the exception of the contractors.

There is no necessity for wholesale seller in this State: the work is carried on by retail seller, who gets contract from the State annually on the highest bid. In the district nazims sanction these contracts on those places which have been authorized by the Revenue Superintendent.

No tax other than the contract money is levied on these articles.

No condition or terms are settled on the sale between the wholesale and retail sellers.

In the district bhang is sold from 2 annas to 3 annas per seer and in the Kotah city at 4 annas per seer.

There is no ruling up to what quantity of bhang the retail seller or consumer can keep with him.

As when there is no ruling for any fixed quantity of bhang, the people do not therefore try to smuggle the drug but openly export and import the same.

Until some new restrictions be put on its cultivation or possession, no amendment in the present state of affairs is necessary.

KOTAH;

The 25th November 1893.

CHOBE RAGHUNATH DASS,

Revenue Superintendent, Kotah State.

JHALLAWAR STATE MEMORANDUM.

(1) There is no control over the growth of the hemp plant, or (2) over the manufacture, importation and sale of any of its products. (3) There is an import duty of 8 annas per maund of 35 seers on all sorts of ganja and bhang and of one anna per ditto on charas. There are also local dues of 2 annas per maund on bhang and ganja, while 1 per cent. is levied on all sales of either drug, weighment dues also being levied when they are sold by weight.

There is no system in this State whatever for the control of hemp drugs. Wild hemp is found in very small quantities; a few stalks here and there probably spring from cultivated seed accidentally deposited. Anybody can import any hemp drug, except into the cantonment, where there is a licensed farmer; once the latter has paid for his license he is free from all control. The extent of cultivation is about 30 acres and the produce about 165 maunds of ganja and 30 of bhang. The trade returns of the last four years do not distinguish between ganja and bhang; they show an average import of 105 maunds of both drugs and an average export of 120 maunds, while 10 maunds 25 seers paid local internal dues. The average receipts have been Rs. 65-8-6 per annum.

JHALRAPATAN; G. R. IRWIN,

The 2nd January 1894. *Political Agent.*

TONK STATE MEMORANDUM.

The hemp plant is not grown anywhere in the State, hence no supervision exists as to its cultivation.

Bhang is manufactured by drying the leaves of the hemp plant. It is imported together with ganja and charas by foreign traders and sold by them to the shopkeepers of the State by whom the drugs are disposed of in small quantities.

The duties imposed on the drugs are as follows :—

	Ganja, Charas, Bhang.	
	Per cent of value.	Per maund.
	Rs.	Rs.
Tonk and Aligarh	20	...
Nimbahera	...	...
Pirawa	...	...
Chabra	...	6
Sironj	...	5

As the hemp plant is not largely used in the State, no system of control is in force beyond that necessary for the levying of customs duties.

Wild hemp is not found anywhere in the State. Bhang is cultivated on lands irrigated by wells, and its leaves are used when dry. There is no system for controlling the possession and sale of the drug.

No prohibition exists as to the cultivation of the hemp plants, nor is it regularly grown in the State. A few bhang plants are grown in vegetable fields irrigated by wells. Ganja and charas are not grown in the State.

Ganja and bhang are imported by "mahajans" and "tambolis" and charas by the Villayatis. None of these hold license, nor is there any arrangement for supervising or controlling the transport of the drugs.

Neither the wholesale nor the retail vendors are licensed. They purchase and sell the drugs as they like without restriction of any kind.

Duties are levied from the importers at the time of their entry in towns or villages, and in order to guard against evasion the same precautions are taken as exist for other dutiable articles, *viz.*, the inspection of persons at the customs post.

Regular retail shops do not exist anywhere in the State. The importers sell the drugs wherever they like.

No rate is fixed at which the drugs must be supplied by wholesale to retail vendors. The price to consumers as obtaining in the Tonk city is as follows :—

Charas	at Rs.	3-12-0	per seer.
Ganja	„ „	0-10-0	„
Bhang	„ „	0-2-0	„

As the system of granting licenses or giving the drugs on contract is not in force, the consumers buy up to any quantity they like, paying as much as the traders demand of them.

There being no prohibition of any kind, smuggling and illicit cultivation are not resorted to.

A proposal to draw up a set of rules is under consideration.

The extent of cultivation is already given in replies to questions (l) and (*c*). The average annual trade is as follows :—

	Ganja.	Charas.	Bhang.
	M. S. C.	M. S. C.	M. S. C.
Tonk	4 9 0	0 31 2	5 24 1
Aligarh	0 2 9	...	0 3 7
Nimbahera	...	...	...
Pirawa	...	...	...
Chabra	...	...	1 3 0
Sironj	5 15 5		

Ganja and bhang are imported into Tonk and Aligarh from Jeypur and into the other parganas from important neighbouring villages, whilst charas comes from Kabul. The extent of trade represents the average annual consumption. In Pirawa and Nimbahera the drugs are not taxed, hence the extent of trade in them has not been given.

A. P. THORNTON, *Lieut.-Col.*,
Political Agent.

BUNDI STATE MEMORANDUM.

No control of any kind is exercised on the growth of the plant.

Hemp drugs are not manufactured in the State. They are imported for sale from foreign States both by wholesale dealers and petty shopkeepers.

Land rent is not separately levied and custom duty is charged at 8 annas a maund. There are two kinds of ganja known as "Indori" and "Shahbadi." Besides these the State knows nothing of any other kind.

There is one uniform system throughout the State. No officer is appointed for its administration, nor is it in any way supervised or based on any Act or rules.

Wild hemp is not found in the State. The drug is imported for sale both by foreign and home traders. The quantity grown in the State is disposed of by traders of the State.

Cultivators grow the hemp plant on land irrigated by wells as other crops. No prohibition or restriction exists as to its cultivation, nor is any sort of control exercised.

Ganja and other drugs are imported for sale by traders of foreign States and by mahajans, "pansaris," and "tambolis" of the State. The system of issuing license is not in force, nor is there any arrangement for controlling the transport of the drugs.

The wholesale and retail vendors are not under any control. They are at liberty to dispose of the drugs in any way they like.

Import and transit duties on ganja, bhang, and charas when brought into the State or passing through it are charged at the uniform rate of 8 annas per maund. Persons found evading the raj duty are charged double the amount, *viz.*, Re. 1 per maund.

Regular or special shops for the sale of the drugs do not exist anywhere in the State, nor are the latter given on contract. Traders and shopkeepers are at liberty to sell the same anywhere they choose without let or hindrance.

No rate is fixed at which the drug must be supplied by wholesale to retail vendors. The average price per maund is given below, and varies according to the state of the market :—

	Wholesale per maund.			Retail per maund.		
	Rs.	A.	P.	Rs.	A.	P.
Ganja	25	0	0	32	0	0
Bhang	10	0	0	15	0	0
Charas	200	0	0	240	0	0

No limit is fixed as to the amount, whether maximum or minimum, which should be sold to, or be in the possession of ordinary consumers. The minimum price of the drugs is given in the preceding answer.

There being no prohibition for the importation of the drugs smuggling is not resorted to. Similarly, there being no prevention for their growth, illicit cultivation is not carried on.

Proposals for modifying the present excise system are under consideration.

Bhang only is cultivated on a few pieces of land watered by wells, but the outturn cannot be estimated. The extent of trade for the past eleven years is as follows :—

	Mds.
Bhang	9,385
Ganja	100
Charas	25
TOTAL ...	9,510

The above are imported from Indore and Ujjain and are sold together with the quantity locally produced. The average revenue of the past 11 years is as follows :—

	Rs.	A.	P.
Import duty	4,440	0	0
Transit duty	610	0	0
TOTAL ...	5,050	0	0

SHAHPURA STATE MEMORANDUM.

Bhang is the only drug produced in the Phulia pargana of Shahpura. Ganja is not grown, neither is charas manufactured. There is no control on bhang of any kind on the part of the Chiefship, except that the land used for its cultivation is charged rent at the usual rate.

Bhang is manufactured by drying the leaves of the plant, and both ganja and bhang are imported from Bhilwara by the shop keepers of Shahpura and sold both in Shahpura territory and to traders and others of foreign States.

For the cultivation of bhang along with the "ranjka" grass land rent is charged at Rs. 6 per bigah, or Rs. 10-6 per acre. Import and export duties on both bhang and ganja are levied at the same rate, *viz.*, one pice per seer. The ganja imported into the Chiefship is of the kind known as "Indori."

There is no system whatever for the sale, etc., of bhang, nor is it controlled by any officer or Acts or rules of any kind. The drug is imported and sold by the shopkeepers at their will and pleasure.

Wild hemp is not found in the Chiefship.

No prohibition exists for the cultivation of the hemp plant, but, as already stated, ganja is not grown anywhere in the Chiefship. Bhang is invariably cultivated with the "ranjka" grass in localities with plenty of moisture.

Ganja and other hemp drugs are imported by mahajans, "tambolis," and by a few "halvais." The system of granting license is not in force, nor is there any arrangement for controlling the transport of the drugs.

They are not under any control, nor are they licensed.

Shahpura is a fortified town with gates, at each of which customs officials are posted, who register all goods imported into or exported from the town and levy duties thereon. In villages "mapadars" are appointed for the collection of duties on all goods, including drugs, etc. On all bhang taken from Shahpura territory to foreign States transit duty is charged at three pies per seer in addition to the export duty. "Mapa" and weighment duties are not levied on ganja as it is not produced in the Chiefship, but import, export, and transit duties are charged at 3 pies per seer.

There being no prohibition for the sale of ganja and bhang, it is not necessary to fix sites of retail shops or grant licenses for the sale of drugs.

No rate is fixed at which the drug must be sold by wholesale to retail vendors. The average wholesale price of ganja, which is imported from Bhilwara, is Rs. 9 per maund and of bhang Rs. 5 per maund, and the retail price Rs. 25 and Rs. 8 per maund respectively.

No maximum amount is fixed for retail sales to, or possession by the ordinary consumers, whilst the minimum prices fixed for the sale of the drugs are given in the preceding answer.

The duties on the drugs being light, and there being no prohibition for their importation or growth, smuggling and illicit cultivation are not carried on.

For the future it is proposed to issue licenses to a limited number of persons at few selected places.

Bhang is not separately grown anywhere in the Phulia pargana of Shahpura. It is cultivated with the "ranjka" grass. The area under bhang cultivation, if separately calculated is estimated at 25 bighas, yielding 125 maunds, at 5 maunds per bigah. In addition to this 25 maunds are imported from Bhilwara, making a total of 150 maunds. Of this, about 125 maunds are consumed annually and the rest exported to territories of foreign states. About 4 maunds of ganja are imported annually and consumed in the Chiefship. A statement showing the revenue derived from the hemp drugs for the past twenty years cannot be submitted owing to the customs duties of the Chiefship having been farmed for a considerable number of years to various persons, who kept no regular account of the income realized by them. The average annual income derived from import, export, and transit duties on the hemp plants is, however, roughly estimated at Rs. 200.

Translated.

A. P. THORNTON, *Lieut.-Colonel,*
Political Agent.

DHOLPUR STATE MEMORANDUM.

1. The hemp plant, *i.e.*, ganja, charas, and bhang, are not produced in this State. They are under the control of the Customs Department.

2. Hemp drugs are not manufactured here. Bhang is generally imported from the British districts and the Bhurtpur State, ganja from the Gwalior State, and charas from Patiala.

3. The duties levied upon bhang and ganja are Rs. 4-4-0 per maund and on charas Re. 1-1-0 per seer. The rates of duty imposed on these drugs in the Sir Muthra Estate are given in the statement* attached.

(*a*) Uniformity of system prevails throughout the State. There is only one contractor for these intoxicating drugs in the State, while in the parganas he has his sub-contractors. This contract is in the charge of the customs officer.

(*b*) Wild hemp, *i.e.*, ganja, charas, and bhang, is not found in the State, nor is any drug manufactured from it.

(*c*) The cultivation of intoxicating drugs is prohibited throughout the State without permission of the Darbar. There is no particular locality in which cultivation is restricted. It is generally the custom throughout the whole territory to obtain permission before they are cultivated. The cultivation is under the control of the customs officer. Persons cultivating without permission are punished.

(*d*) The contractors import these drugs by rail and road from the British districts and Gwalior and Patiala States under passes granted by the Political Agent and the Collectors concerned.

(*e*) In this State contract is given for the sale of intoxicating drugs for a certain period. It is under control of the Customs Department.

(*f*) Ganja, charas, and bhang are not produced in the State, and hence the rates of land revenue cannot be given. The rates of duty levied on these drugs, when imported into the State by a trader or contractor, are given in answer (3). The sellers of these drugs, if found to have evaded payment of the duties, are punished.

(*g*) There is only one contractor for the State. He has his own sub-contractors in the parganas. The number of shops is not determined with reference to area and population. There are in all twelve shops in the parganas besides the general contractor. The retail sale vendors do not purchase these drugs from the wholesale vendors, but import them from outside, *i.e.*, bhang from British districts, ganja from Gwalior territory, and charas from Agra and Patiala. These drugs are sold at one price throughout the State, *viz.* :—

Ganja, at ½ seer per rupee.

Bhang, at 1½ to 2 seers per rupee.

Charas, at 2 chitaks per rupee.

(*h*) The retail vendors do not purchase these drugs from the wholesale vendors, but bring them from foreign districts. The price of these drugs does not differ in any place in the State. They are sold at one and the same price throughout the State.

(*i*) No maximum amount is fixed. These drugs are sold at one price.

(*j*) As far as possible, smuggling from or to other places does not take place, nor is illicit cultivation carried on, nor is illicit possession allowed. No one except the contractor is allowed to sell these drugs.

(*k*) None.

(*l*) Ganja, charas, and bhang are not cultivated in the State. The yearly trade in ganja, charas and bhang is as follows :—

	Mds.	Srs.
Ganja	38	$36\frac{6}{16}$
Charas	0	$25\frac{7}{16}$
Bhang	33	$36\frac{2}{16}$

Ganja is imported from Antri (Gwalior), bhang from Kanauj, Chupra, Mhow, and Kerowli state, and charas from Agra and Patiala.

* Not printed.

SIROHI STATE.

Statistics relating to hemp drugs for the years 1873-74 to 1892-93.

Year.	Total population of District.	Cultivation of hemp plants for production.				Amount of imports from other provinces or states in maunds and seers.			Amount of exports to other provinces or states in maunds and seers.			Number of licenses for wholesale vend.			Number of licenses for retail vend.		
		Area under cultivation.			Licenses for cultivation.												
		Ganja.	Charas.	Bhang.	Ganja.	Charas.	Bhang.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Samvat.								M. S. C.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.										
1932																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1933																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1934																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1935																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1936																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1937																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1938																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1939																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1940																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1941																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1942																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1943																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1944																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1945																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1946																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1947																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1948																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1949																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1950																None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1873-74	186,359	Area not ascertained.			People grow drugs for pleasure.			The import of opium from Rajputana cannot be known on account of the old system of inland customs duty.	No import appears to have been made.			No export appears to have been made, nor is there any record.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1874-75		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1875-76		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1876-77		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1877-78		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1878-79		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1879-80		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1880-81		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1881-82		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1882-83		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1883-84		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1884-85		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1885-86		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1886-87		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1887-88		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1888-89		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1889-90		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1890-91		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1891-92		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.
1892-93		Ditto.			Ditto.			Ditto.	Ditto.			Ditto.				None.	None.	None.	None.	None.	None.	None.	None.	None.	None.

Year.	Amount of license-fees.				Amount of fixed duty.				Total revenue.				Quantity sold (retail).				Revenue per head of population, column 46 ÷ column 2.	Population per retail license, column 2 ÷ column 26.	Remarks.
	On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	On ganja.	On charas.	On bhang.	On other preparations of the hemp plant.	From ganja.	From charas.	From bhang.	From other preparations of the hemp plant.	Of ganja.	Of charas.	Of bhang.	Of other preparations of the hemp plant.			
27	28	29	30	31	32	33	34	35	37	38	39	40	42	43	44	45	46	47	48
	Rs.	Rs.	Rs.	Rs.	Rs. a. p.	Rs.	Rs.	Rs.	Rs. a. p.	Rs.	Rs.	Rs.	M. s.	M. s.	M. s.	M. s.	Rs.		
1932	196 0 0								196 0 0										
1933	209 0 0								209 0 0										
1934	209 0 0								209 0 0										
1935	197 0 0								197 0 0										
1936	247 9 0								247 0 0										
1937	293 0 0								293 0 0										
1938	270 0 0								270 0 0										
1939	280 0 0								280 0 0										
1940	319 0 0								319 0 0										
1941	359 0 0								359 0 0										
1942	345 0 0								345 0 0										
1943	534 5 3				177 5 3				534 5 3										
1944	967 12 9				102 12 6				967 12 9										
1945	459 9 3				93 9 3				459 9 3										
1946	324 12 3				232 12 3				324 12 3										
1947	679 0 0				86 0 0				679 0 0										
1948	336 8 0				115 8 6				336 8 0										
1949	556 0 0				137 8 6				556 0 0										
1950	923 4 0				202 8 0				923 4 0										
1873-74	7,339 4 0				The amounts due at this year on account of the old system of inland customs duty.				9,553 5 3				Cannot be ascertained, as no record is kept by the license holders.				The licenses to sell ganja are only given in this State at the following places :— (1) Sheorganj. (2) Sirohi. (3) Pindwara. (4) Abu Road, Panhpur, Kasheregani, Maupore. (5) Abu. (6) Ambra. (7) Rohera. For the sale of other hemp drugs no licences are issued or given. As for the revenue of bhang and ganja, which is produced in this country, the average of the last ten years shows that 40 maunds of bhang and 1 maund of ganja are recovered from the cultivators. The whole quantity is given in charity and sent to Mahadeo's temples and none is used in liquor. Therefore the amount cannot be shown in money.		
1874-75	1,000 1 3												Ditto*		Ditto.				
1875-76													Ditto.		Ditto.				
1876-77													Ditto.		Ditto.				
1877-78													Ditto.		Ditto.				
1878-79													Ditto.		Ditto.				
1879-80													Ditto.		Ditto.				
1880-81													Ditto.		Ditto.				
1881-82													Ditto.		Ditto.				
1882-83													Ditto.		Ditto.				
1883-84													Ditto.		Ditto.				
1884-85													Ditto.		Ditto.				
1885-86													Ditto.		Ditto.				
1886-87													Ditto.		Ditto.				
1887-88													Ditto.		Ditto.				
1888-89													Ditto.		Ditto.				
1889-90													Ditto.		Ditto.				
1890-91													Ditto.		Ditto.				
1891-92													Ditto.		Ditto.				
1892-93													Ditto.		Ditto.				

KARAULI STATE MEMORANDUM.

Ganja and charas are not produced in the State. Bhang grows spontaneously. Malis generally cultivate it on grounds near the boundary walls of their fields. When leaves come out, they are collected and dried and are then brought into use. Sometimes they are sold also. There is no special control from the side of the State.

Ganja and charas are not produced here. Ganja is generally imported from the Gwalior territory and charas from the town of Bhurtpur. Bhang grows spontaneously, sometimes cultivated by the malis and sometimes imported from the territory of Jeypur.

The duties levied upon ganja are Rs. 2-8-0 per maund and on charas Rs. 10 per maund, and on bhang Re. 1 per maund.

Uniformity of system prevails throughout the State. There is one officer at the head of the Department of Customs who resides at the capital. The levying of duties and other matters connected with the Department of Customs are in charge of this officer, and according to the customs tariff drawn up in 1882, the duties on different articles are levied by the Department of Customs.

Hemp is neither cultivated here nor grows in a wild state.

Hemp plant for the production of ganja or charas is neither cultivated nor grows spontaneously. No restriction is put upon bhang, the production of which is very limited.

It is not particularly known who imports these drugs. Bhang is generally imported by the malis and cultivators for sale. An annual fair, called the Sivaratri fair, is held here in the month of February. In this fair local and foreign traders generally bring these drugs for sale. During this fair no customs duties are levied, nor any license issued for their importation. Certainly after the fair is over, duties are levied upon these drugs. Hence there is no necessity for the State to supervise the storing or transport of these drugs. Of course, strict supervision should be maintained for the levying of duties. As for the sale of these drugs, contract is given to the vendors in three places, *viz.*, Kerowli town, Maudrel and Machilpur. The contractors have the right to sell these drugs in retail. Excepting the contractors others are not allowed to sell it in retail. Everybody has the right to sell these drugs to the contractors. There is no restriction on this. But if these drugs are imported either by the contractors or somebody else, they are not exempted from paying duties.

The vendors of these drugs are not under control here. But they are licensed vendors. These licenses are given to them after they had paid fees for the licenses. No rent is collected if any of these drugs are cultivated.

Customs duties are surely taken. The following is the scale of duties levied upon these drugs if they are exported or imported :—

	Rs.	A.	P.	
Ganja	2	8	0	per maund.
Charas	10	0	0	„
Bhang	1	0	0	„

The officers of the Customs Department supervise over the collection of customs duties. Smugglers, etc., are punished according to the customs regulations.

The sites of retail shops are not fixed by the State. The contract for the sale of these drugs is given by auction. The contractor opens his own shop for the sale of these drugs. The number of shops is not fixed with reference to area, or population, and the setting up of a new shop depends upon the sale of these drugs. In the town of Kerowli the total number of shops is six, and there is one at Maudrel and one at Machilpur.

The sales of these drugs are given on contract. The contractors are called both wholesale and retail vendors. No rate is fixed for retail vendors from the state, so no average price could be recorded, nor could the contractors of this place say this, for no record is kept of these things.

No modification regarding the existing excise system is under consideration.

Ganja and charas are not produced here. Bhang grows spontaneously to some extent. Mali cultivates it to some extent. Hence no trade is here regularly carried on, since the production is very limited. On the other hand, these are imported from the neighbouring States. No rent is collected from those lands in which bhang is cultivated.

KISHENGARH STATE MEMORANDUM.

(1) The hemp plant is cultivated in irrigated lands along with green vegetables by cultivators of the mali or gardener class exclusively. These cultivators are professional greengrocers and, as such, live in larger villages or towns only, where there can possibly be room for a market for green vegetable; and consequently the cultivation of the hemp plant is generally met with in towns and larger villages.

The hemp plant is never cultivated as a principal crop, and is, as a rule, locally sold and consumed.

There is practically no control of the growth of this plant.

(2) The plant is cut and dried in the sun or shade and then beaten with sticks, and the leaves are then collected and sold as bhang.

The flowering-tops of female plants are plucked and pressed under slabs of stones and taken out in a compressed state, which is called ganja. This is used for smoking.

Bhang is imported from Shekhawati in Jeypur.

Ganja is imported from Malwa.

Charas is not made in Kishengarh. It is brought from Afghanistan by the Vilayatis (Kabulis) and by them sold to the local vendors.

(3) The duties imposed on these drugs are as follows :—

Bhang, four annas per maund.

Ganja, one rupee and eight annas per maund.

Charas, do. do. do.

(*a*) A uniform rate of duty is charged all over the State, and anybody can sell any of these drugs.

The administration of the system is carried on by the "Mapa" (Customs) Department.

(*b*) Wild hemp is not found to any considerable extent in this State. It is regarded as an inferior kind of drug compared to cultivated hemp, and is consumed as bhang.

Wild hemp is found in such small quantities that it has not been considered worth the while of the "Mapa" Department to control the possession and sale of such drug.

(*c*) The cultivation of the hemp plant for the production of ganja or other drugs is not prohibited. The cultivation is found scattered all over the State in small patches or mixed with vegetable crops in the lands of larger villages and towns.

(*d*) The baniyas and specially the Tambolis (betel-leaf sellers) are the importers of bhang and ganja. They are not licensed. No special arrangements are in force for their supervision and for controlling the storing and transport of these drugs.

In larger towns, the duty is collected by the "Mapa" officers on the drugs entering the gateways. In the mofussil towns and in villages the "Mapa" officers go round in their circles every two months or so, and make collections of the duty on the imports of these drugs that may have been made during the interval.

(*e*) There has been no system of licensing vendors in force for the last twelve years, or thereabouts.

Formerly the sale of the hemp drugs used to be annually farmed out to the highest bidders for the larger towns only.

(*f*) The only tax at present levied is the customs import duty mentioned above in (3) and the "Mapa" officers take precautions against evasion; there is, however, no special precaution considered necessary.

(*g*) There is no restriction as to the number and site of shops for the vend of these drugs.

(*h*) No rate is fixed at which the drug must be supplied by wholesale to retail vendors.

The average retail price is as follows :—

		At the Capital.	In the Mofussil.
Bhang	...	Rs. 6 per maund.	Rs. 4-8-0 per maund.
Ganja	...	Two seers per rupee.	Two seers per rupee.
Charas	...	Not available.	Not available.

(*i*) None.

(*j*) Hardly any smuggling from other provinces or States. No special preventive measures are taken or are considered necessary.

(*k*) It is under contemplation to institute a system of excise for decreasing the consumption and controlling the sale of the hemp drugs, by restricting the privilege of the selling of the drugs to licensed vendors alone, without any limit being placed on the number of licenses for some time, and by increasing the duty chargeable on these drugs.

It is not contemplated to fix any maximum or minimum retail prices, as in the absence of any limit to the number of licenses, the competition between the various licensed vendors and the increased duty would conduce to bring about a fair regulation of the prices.

JAISALMERE STATE MEMORANDUM.

In the Jaisalmere State the hemp plant does not grow spontaneously. There are only three parganas where it is cultivated. In about 3 hals ($6\frac{1}{5}$ acres) in Jaisalmere itself and about $\frac{1}{3}$ of a hal each in Deva and Fatehgarh the cultivation is carried on every year. Thus, in the whole State, only about 8 acres of land is being cultivated; the average production is estimated to be 33 maunds of "bhang" and "ganja." The cause of its not being cultivated in other parganas is the want of water required for its irrigation. In some parganas there being salt water, its cultivation cannot be carried on at all. The cultivation not being prohibited by the Darbar, the plant is left altogether uncontrolled. It is generally cultivated with vegetables and irrigated with well water. It is never cultivated in a separate area preserved for its own cultivation, as in other provinces.

2. The hemp plant is called by two names, male and female (cultivated). "Bhang" is the name applied to the dry leaves of the hemp plant, whether male or female. But the female plant, having little intoxication as well as not giving flowers (used as ganja) is not cultivated in the country. "Ganja" is the name applied to the dry flowering-tops of cultivated male plant (not female as explained by Dr. Prain) which have become coated with resin in consequence of their inability to set seeds freely.

"Charas" is not produced in this country, nor does any one consume it.

The varieties of "ganja" explained by Dr. Prain in the introductory of the Commission's questions regarding hemp drugs are neither known nor sold in this country. It is never trodden nor rolled under foot here. The leaves and the seeds having been separated, the dried flowers are selected and sprinkled over with water. They are then broken by hands and smoked. But as the flower-tops of "ganja" are detached from the twigs, whether the detachment has been accidental or deliberate, it may not be improper to call it "chur" or "broken ganja."

3. The hemp drugs are not manufactured and sold in the State. The plants are purchased by the consumers from the malis who cultivate them, and the preparations are made by them in their own houses. Sometimes the shop-keepers purchase these plants, and prepare and sell them to the consumers.

4. Owing to the want of good administration of the Customs Department, no statistics are available from year 1872-73, but as the new reforms were introduced in 1884 in this department, the customs statistics have been obtained from that year. From the statistics, however, it appears that these drugs were never imported or exported even in a small quantity during the past ten years (from 1884 to 1893). This shows that only the amount produced in this country was consumed by the people, and they had no need of either importing or exporting the drug, either for personal consumption or for trade.

5. There are no special acts or rules in respect to the control of these drugs, nor is there any controlling officer. They are, however, controlled by the customs officer as far as import and export is concerned.

6. The Customs Department levies an import duty of Rs. 3 per maund and a transit duty of Re. 1-8-0 per maund on these drugs; the export duty being exempted by the Darbar.

7. Besides the customs duty there is no direct or indirect tax imposed on the preparation or cultivation of ganja and bhang. The malis pay the usual tax for the land they cultivate, but no special tax for the cultivation of hemp plant is levied.

8. No case of smuggling "bhang" and "ganja" has come to notice up to this time, but the customs officer is authorised to fine the persons smuggling drugs.

9. As a very small quantity of these drugs is produced, no modifications of the present system are under consideration.

REPORT BY BRIGADE-SURGEON-LIEUTENANT-COLONEL D. D. CUNNINGHAM, F.R.S., C.I.E., ON THE NATURE OF THE EFFECTS ACCOMPANYING THE CONTINUED TREATMENT OF ANIMALS WITH HEMP DRUGS AND WITH DHATURA.

Three distinct experiments were conducted in the Biological Laboratory attached to the Zoological Garden in Calcutta on the effects following the continued administration of hemp drugs and of dhatura to monkeys.

In the first of them a monkey (*Macacus rhesus*) was subjected to frequent inhalations of the smoke of ganja during a period of many months; in the second, two monkeys (*M. cynomolgus*) were treated with almost daily doses of charas for more than two months; and in the third a second specimen of *M. rhesus* was caused to inhale the smoke of the seeds and leaves of dhatura periodically during a period of about six weeks.

I regret that no experiment on the effects following inhalation of smoke derived from a mixture of ganja and dhatura was carried out. On learning that the Hemp Drugs Commission were desirous that such an experiment should be tried, I gave instructions for its immediate initiation, but as I was obliged to leave Calcutta almost immediately after doing so, my orders were apparently forgotten, and, on my return to Calcutta in July, I ascertained that no continuous administration of dhatura had been begun until the receipt of reiterated instructions from Europe reached the laboratory in the end of May, and that then dhatura alone and not a mixture of dhatura and ganja was made use of.

Whilst regretting that the wishes of the Commission have not been fully complied with in this respect, I do not feel sure that the results of the experiments, conducted as they have been, are not really more instructive than they would have been had the mixed drugs been made use of in the third, seeing that, in so far as isolated instances are capable of furnishing grounds for inference, a comparison of the phenomena present in the first and third experiments appears to indicate that, whilst prolonged, habitual inhalation of the smoke of ganja alone fails to give rise to any appreciable morbid effects on the cerebral nervous centres, a comparatively brief exposure to the influence of habitual inhalation of the smoke of dhatura alone is accompanied by conspicuous injury to them.

In carrying out the experiments there was no difficulty in securing the administration of charas so long, at all events, as the animals did not dislike the drug, as it can be mixed with milk, and the mixture was for some time freely partaken of. In order, however, to secure efficient inhalation of smoke of ganja or dhatura, it was necessary to provide a special apparatus, the nature of which is illustrated in the accompanying photograph.*

* Not reproduced.

It consisted of a chamber which could be hermetically closed at all points, save where a supply and a discharge tube were connected with its opposite extremities. The walls of the chamber were composed of wood covered externally by a coating of zinc, and contained two windows closed with plate glass, one in either of the lateral walls. At one end there was a sliding door fitting accurately into a brass lined groove. The supply-tube entered near the bottom of one of the terminal walls and the discharge one emerged towards the top of the opposite one so as to secure an even diffusion of the smoke throughout the interior of the chamber as far as possible. The supply-tube was connected distally with a large wash-bottle, through which the smoke from a chillum of ignited ganja or dhatura passed, and the discharge one with two large water-aspirators, which served to draw the smoke through the entire apparatus.

The great difficulty was to secure that no leakage should take place at any of the numerous joints which were present throughout the apparatus, but this was overcome by the liberal application of cerate and clay, and it then worked most satisfactorily; the only trouble which was encountered lying in the tendency which the portion of the supply-tube nearest the wash-bottle had to become choked by resinous matter which had not been completely removed from the smoke during its passage through the water.

The following notes indicate the details of procedure and results in the individual experiments.

EXPERIMENT I.

On the effects of the systematic inhalation of the smoke of ganja.

Nature of the animal employed: *Macacus rhesus* ♂ weighing 16 lbs.

The first inhalation was administered on the 7th of November 1893 and the last on the 12th of July 1894, so that the experiment extended over more than eight months. During this

period one hundred and eighty one inhalations were administered. During the greater part of the period the administrations were repeated almost daily save on Sundays, but during March they were repeated only on alternate days, and during April and May only at irregular intervals owing to the fact that at that time the animal was suffering from a mild but prolonged attack of dysentery.

During the earlier part of the course of the experiment the animal apparently disliked the treatment as he violently resisted introduction into the inhalation-chamber, was restless when the smoke began to enter it, and not unfrequently attempted to prevent its entrance by plugging the orifice of the supply-tube. As time went on, however, and the experience lost its strangeness, his objections gradually diminished and were ultimately replaced by a positive desire for the treatment. He then readily entered the chamber, resisted any attempts to remove him from it before he had had a full dose, was restless and uneasy on days on which the treatment was omitted, and on two occasions on which he managed to make his escape from his cage, showed an evident desire to enter the chamber on his own account.

The symptoms attending the process of inhalation were not invariably of precisely uniform character. As a rule they came on quietly and insensibly and consisted in steadily increasing drowsiness, leading on to quiet sleep. During the course of exposure the conjunctivæ and eyelids frequently became considerably congested, but this may, of course, have been merely dependent on direct irritation incident on their contact with the smoke. When removed from the chamber ere profound sleep had supervened the animal was evidently intoxicated. In many cases he was incapable of sitting up without supporting himself by means of grasping the bars of his cage, and, when less profoundly affected, being very unsteady on his legs. On being introduced into his cage, he not unfrequently either at once or after a short delay lay down and slept quietly for some time. On awaking from such sleep, as well as in those cases where sleep did not intervene, he almost invariably showed symptoms which appeared to indicate that he was for some time the subject of optical delusions. He gazed about attentively in directions in which nothing which seemed likely to excite his curiosity was present, and carefully scrutinised the floor of his cage for objects which did not exist. Such symptoms continued to persist for a considerable time after all other indications of intoxication had disappeared, continuing to manifest themselves in greater or less degree during the entire course of the latter portion of any day on which the treatment had been administered in the morning.

On a certain number of occasions, however, the symptoms did not follow this normal course. On these the onset of signs of drowsiness was greatly delayed and had hardly begun to show itself ere the animal was suddenly seized with violent general convulsions and immediately thereafter became profoundly unconscious. The symptoms on the recovery of consciousness in no way differed from those in cases where the earlier ones had followed the normal course. No satisfactory explanation of the occurrence of such exceptional phenomena could be arrived at, and it must remain uncertain whether they are to be regarded as the consequence of certain temporary subjective peculiarities on the part of the animal or of variations in the quality of the drug.

In no instance was there any appreciable indication of the development of any cerebral excitement either during the administration of the drug or after intoxication had been fully established.

The normal symptoms were those of simple drowsiness and loss of will-power accompanied by optical delusions—those characterising the exceptional cases of temporary abnormal activity of the spinal cord and basal ganglia which may very probably have been dependent on diminution in the inhibitory power of the higher cerebral centres.

The general health of the animal remained excellent during the entire course of the experiment save for a period during the months of April and May, in which he suffered from dysenteric symptoms. The occurrence of these, however, cannot be in any way definitely ascribed to the use of the drug as they are of frequent occurrence among monkeys in confinement apart from any special treatment. The only permanent appreciable effect resulting from the treatment manifested itself in the form of a very considerable diminution in appetite for food, which set in shortly after the initiation of the experiment and thereafter remained persistent throughout its entire course.

At the desire of the Hemp Drugs Commission the experiment was brought to a close on the day following my return to Calcutta on the 12th of July 1894. Death was induced by means of prolonged administration of chloroform, and a *post-mortem* examination was conducted immediately it had occurred. The results of this were as follow in so far as mere casual naked-eye-inspection goes, for, as I have already pointed out, the detailed histological examination of the condition of the various organs and tissues is a matter not of a few hours' but of many weeks' work, so that it has been impossible for me to carry it out and at the same time to meet the wish of the Commission for the immediate submission of a report. Specimens of all the more important organs have, however, been carefully preserved and will form the subject of detailed histological examination hereafter.

Results of post-mortem examination of the animal.—The body weighed 13 lb. 7 oz., indicating a loss in weight of 2 lb. 9 oz. during the eight months of treatment. This, or at all events, the whole of this loss, is certainly not fairly creditable to the treatment, seeing that for a

considerable period not long before the close of the experiment the animal had been subject to an attack of dysentery, which would alone have been sufficient to occasion considerable loss of weight.

On laying the body open the phenomenon which at once attracted attention as unlike any ordinarily present in caged monkeys, was the great amount of fat accumulated in the omentum, the mesentery and the visceral and parietal pericardium. This was specially noteworthy in connection with the markedly diminished ingestion of food which had characterised the subject of the experiment during the greater part of its course, and with the coincident considerable reduction in body-weight which had occurred.

The body generally appeared to be fairly well-nourished and a considerable amount of subcutaneous fat was present.

The lungs were quite exceptionally healthy for a caged monkey; neither of them being in the least degree adherent to the thoracic walls, the left one being apparently perfectly healthy, and the right merely showing a few patches of deep congestion towards the base.

Under the influence of the osmic acid contained in the fixing solution in which specimens of it were immersed, the muscular tissue of the heart showed unequivocal signs of the presence of a certain amount of interstitial fat. Whether, however, these were due to true fatty degeneration of the muscular elements proper, or, as is more probably the case, to mere fatty accumulation in the connective tissue, must remain an open question until the detailed histological examination of the tissues has been carried out.

The liver, spleen and pancreas appeared to be perfectly normal, save that, as in the case of the cardiac muscle, a slight excess of interstitial fat made its appearance under the influence of osmic acid.

The kidneys, the stomach, the large and small intestines and the cerebro-spinal nervous centres were all apparently perfectly healthy.

The only peculiar features in the body, then, which could in any way be rationally regarded as connected with the treatment to which the animal had been exposed, were the excessive accumulation of fat in the tissues of the omentum, peritoneum, and pericardium, and the tendency to the establishment of a similar accumulation in the cardiac muscle, the liver, the pancreas and the spleen.

But the only persistent symptom attending the treatment during life was a considerable diminution in appetite for food, so that, in so far as the results of a single experiment afford any ground for inference, it would appear that the most important effect of the habitual employment of inhalations of the smoke of ganja is to give rise to diminution in the normal processes of tissue-waste to such a degree that local accumulations of fat are liable to occur even in spite of the coincident and similarly originating diminution in the ingestion of food. The diminution in activity of the normal processes of tissue-waste tends, on the one hand, to give rise to decreased ingestion of food and on the other to local accumulations of fat in spite of this. But, if the habitual practice of inhalations of the drug really do produce such effects, it is clear that, in place of being hurtful, it may be positively beneficial to people who are obliged to undergo exertions without having the means of procuring a diet fully adapted to make good the amount of tissue-waste normally associated with these. As has been already pointed out, it is necessary to exercise extreme caution in coming to any definite conclusions from the experiment, first, because it is an isolated one, and, second, because the *post-mortem* examination has not yet been histologically completed, but the evidence which it has afforded, is, in so far as it goes, rather in favour of the use of the drug under certain conditions than adverse to it.

EXPERIMENT II.

On the effects of habitual ingestion of charas.

In this experiment two small monkeys *(M. cynomolgus)* were employed. One of them, A, weighed 5 lb 7 oz., and the other, B, 4 lb 1 oz.

A standard globule of the drug, representing the amount of his ordinary dose, was obtained from a habitual charas-eater. It weighed 1·05 grain and at the outset of the experiment one-twentieth part of that amount was daily administered to A, and one-twenty-fourth part to B, as approximately proportionate doses weight for weight, as compared with those of the man and his ordinary doses.

The drug was rubbed up with a little milk and the animals readily partook of the mixture. Doses of the above amount were daily administered for some time, but, as they failed to produce any appreciable symptoms, the quantity was then gradually increased, until towards the close of the experiment as much as 3 grains, was given daily to each of the animals.

The experiment was begun on the 31st October 1893 and continued until the 6th January 1894, and during this period doses were administered on 62 days. The original small doses were employed until the 12th November when the amount was somewhat increased. On the 25th November the dose was raised to 0·52 grain, on the 28th December to 2 grains and on the 30th December to 3 grains.

No conspicuous effects manifested themselves during the entire course of the experiment. At the outset the animals appeared for a time to be somewhat quieter than they had been previous to the administration of the drug, but, if this were in any way a consequence of the treatment, it was one of very transitory nature as it soon wore off, and during the whole of the latter part of the course of the experiment they appeared to be entirely unaffected in any way, and were quite lively. Their appetite for food underwent no appreciable alteration throughout.

The rapid and considerable increases in the amount of doses of the drug which were latterly made unfortunately had the effect of bringing the experiment to an abrupt and untimely termination, for after they had for a few days partaken of doses of 3 grains both animals simultaneously absolutely declined to touch the milk containing the drug, and, in spite of repeatedly renewed attempts to induce them to resume the habit, they have persistently refused to do so up to the present time. They were therefore only under treatment from the 31st October until the 6th of January, which was the last day on which they could be induced to partake of the milk, and the only noteworthy phenomenon which presented itself during the entire course of the experiment was the abruptness with which an extreme distaste for the drug set in. This is the more remarkable when compared with the phenomena which presented themselves in connection with continued treatment by inhalations of ganja. In the case of the ingestion of charas continued treatment was accompanied with the development of a distaste for the treatment, whilst in the case of ganja-inhalation it led to the acquisition of an abnormal craving for it.

Experiment III.

On the effects of habitual inhalations of the smoke of the seeds and leaves of dhatura.

The subject of experiment, as in the case of that on the effects of the inhalation of the smoke of ganja, was a fair-sized specimen of *Macacus rhesus*. The treatment was initiated on the 1st June and continued until the 11th July, so that the experiment lasted for a period of about six weeks. In its conduct the same inhalation-apparatus was employed as in the first experiment. At the outset the seeds of dhatura were made use of as the source of smoke, but as the latter appeared to be undesirably potent, leaves were presently substituted for them and were persistently employed throughout the rest of the experiment.

The symptoms attending the treatment were not invariably quite uniform in character. On some occasions indications of a certain amount of cerebral excitement were present for some time, but as a rule drowsiness and gradually increasiug intoxication manifested themselves from the outset, either alone or associated with symptoms of irritation of the respiratory apparatus as indicated by coughing.

The animal was killed by means of prolonged administration of chloroform on the morning of the 14th July and a *post-mortem* examination conducted at once with the following results:

The lungs were not adherent to the thoracic walls, but were both deeply congested almost everywhere, and specially towards their apices in which numerous tubercular nodules and small cavities were present. Such phenomena are, of course, very frequent in the lungs of monkeys in confinement, but it remains possible that the general pulmonary congestion may have been partially due to irritation incident on the inhalation of the smoke. The visceral pericardium was almost devoid of fat and was somewhat thickened and opaque, especially over the region of the right auricle. The omentum and mesentery were also very free from fat. The spleen appeared to be rather anæmic and was somewhat fibroid in texture. The liver, pancreas, stomach, large and small intestines, and kidneys presented no abnormal appearances.

On opening the cranium the dura-mater was found to be somewhat thickened and, especially in the neighbourhood of the superior longitudinal sinus, very conspicuously congested. In this region, too, the membrane in the occipital region was fixed to the cranial walls by soft, very vascular adhesions. The pia-mater was thickened and so highly injected throughout that the cerebral surface had a generally diffused pink tint. The cerebral substance was everywhere abnormally soft and so friable as to render any immediate removal of the membranes impossible without the occurrence of much destruction of the nervous tissue. Like the surface, although in minor degree, it was of a pinkish tinge owing to abnormal accumulation of blood. Conditions of this kind appeared to be universally diffused throughout the whole of the cerebral centres, the texture of the hemispheres, of the cerebellum and of the basal ganglia being alike soft, and the evidences of abnormal congestion universally distributed. In spite of this, however, the spinal cord and its membranes were to all appearance perfectly healthy.

In so far as a single experiment goes the results in this case would, then, seem to show that the habitual inhalation of the smoke of dhatura, even when only practised for a relatively brief period, is sufficient to establish serious morbid changes in the cerebral nervous centres, and that it therein differs from the habitual inhalation of the smoke of ganja extending over a much more prolonged period. This clearly indicates the necessity of distinguishing between cases in which ganja alone is employed from those in which a mixture of ganja and dhatura is substituted for it, as otherwise certain prejudicial effects which are really due to the use of the latter drug may be erroneously credited to the former one.

The 21st July 1894. D. D. CUNNINGHAM.

REPORT BY MR. DAVID HOOPER, GOVERNMENT QUINOLOGIST, MADRAS, ON THE RESULTS OF ANALYSIS OF HEMP DRUGS.

I have the honor to forward the results of the analyses of samples of hemp drugs submitted for chemical examination by your Commission, together with those collected by myself and others in this presidency.

This is the first time that a systematic examination of hemp drugs from different parts of India has been conducted. Previous investigators have contented themselves with searching in commercial samples for the active principle, without first satisfying themselves as to the variation in the composition of the plants grown in different districts and under different circumstances.

The active principle of hemp is contained in, and intimately associated with, the resinous secretion which is found in the leaves of the plant, and which is formed in abundance in the flowering tops when the cultivated female plants are grown by themselves. The resins in this secretion are associated with one or more alkaloids, existing in small quantities and not possessing the peculiar physiological action of the drug. The chief object of the analysis was not to determine the alkaloid, as in examining tobacco for nicotine, but to separate the resinous matter in as pure a condition as possible, taking the precaution to free the sample from excess of seeds yielding fixed oil.

Other objects sought for in the examination of Indian hemp were the following: determinations of extractives directly soluble in spirit and in water; determination of nitrogen; search for sugar, and estimation of that body when present; a proximate analysis, showing the amounts dissolved by ether, and subsequently by rectified spirit and water, and the crude fibre and ash contents; nature of the ash, solubility of ash in water with estimation of alkalinity, solubility in acid, amount of insoluble or sandy matter, analysis of ash of ganja and bhang; proportion of seeds in ganja and bhang; composition of the seeds; nature of the resinous extractive.

The literature on the subject of the chemistry of ganja has been referred to and digested, and Dr. Prain's "Report on the cultivation and use of ganja" has been read with interest; but before offering any remarks I will first enumerate the samples of drugs received, describe the methods of their analysis and give the tables of results.

The samples of ganja.—In order to compare the composition of all the samples with those of acknowledged superiority, such as Bengal ganja, specimens were obtained through the Commissioner of Excise from Naogaon in Rajshahi district. The four kinds—large flat twig, small twig round and chur were typical specimens and were received in good condition. Surat, No. 1, was in matted heads with a fair amount of seeds. Surat ganja, No. 2, was in a loose dusty condition with many seeds and some stones. Besides these impurities, it gave a grass green coloured tincture, characteristic of bhang, and as leaves predominated it was placed among the bhang. The two kinds of Sind ganja came from Karachi; they were labelled "first kind known as Panvel ganja," "second kind or Sholapur ganja." The first specimen had a good odour and was broken up into smaller pieces than the second, which was in clean matted heads. The Commissioner of Excise, North-Western Provinces, sent some pieces of Baluchar and Pathar ganja used in Allahabad, but not grown in the provinces. These fragmentary samples did not admit of a full analysis being made. The North-Western Provinces supplied two illicit ganjas—one from Ghazipur, and the other from Basti. The latter was a small sample "obtained by a fakir from the border of the district or from the adjacent Nipal terai." It was rather seedy and dirty in appearance. The Ghazipur specimen was of a good green colour, but the leafy bracts were thin, and the tops were not agglutinated as in other samples. The Khandesh ganja had the Dhulia post mark on the parcel, and was representative. The Satara drug was labelled "ganja flower tops"; it was seedy, it contained a few insects and had only a poor odour. The Ahmednagar specimens were interesting in having a different commercial value attached to each. One was sold for Rs. 55, the second for Rs. 50, and the third for Rs. 48 for three Bengal maunds. The retail price of each was 12 annas per pound. There was not much difference in their appearance, except that perhaps there was more stalk in the third kind. The Nasik ganja was in matted heads with fair odour, and almost entirely free from seeds. The Solahpur sample was clean and had few seeds; its composition was different to the Solahpur ganja imported in Sind. The Bijapur ganja had a few seeds, a slight musty odour and a brownish-green colour. Of the two specimens from Nimar district, one was marked "cleaned ganja raised from local seed," and the other "cleaned ganja raised from Dhakalgaon seed." The Hyderabad drug was of a good colour and fresh. With reference to the Madras samples, the two kinds purchased in the Ootacamund bazar were called "Javaj" or "Javathu" and "country ganja." The first is considered the best kind, and from its name very probably came from the Javadi hills; the second kind came from Coimbatore. An

authentic sample of ganja from Coimbatore was obtained with the view of comparing it with the "country ganja." The Tanjore sample was sent by Dr. Mootoosawmy of that city, who stated that all the ganja was "imported from Chittore, Vellore and a mountainous village in the latter district called Kaleyimbody."* Bangalore also appears to be supplied with ganja from Vellore. The sample from Madras city purchased by the Commission was said to have been imported from the Jawadis. It had a cummin-like odour. Mr. Benson, Deputy Director of Agriculture, obtained several specimens of Ganjam ganja which varied very much in colour, odour and proportion of seeds. My analysis was made on a mixture of the better kinds containing few seeds. I am also indebted to Mr. Benson for procuring for me sample of the ganja prepared in Daggupad in the Kistna district. The small leaves alone with the flowering tops were very numerous, linear, with revolute margins, and very brittle. The fruit was set, and the bracts were covered with brownish glandular hairs, and the whole was very fragrant of southernwood. This sample is remarkable in yielding the largest amount of resin of all the others, including the Naogaon ganjas.

The samples of bhang.—With the exception of the samples from Bhagalpur and Monghyr which were sent by the Collectors of those stations, all the others were forwarded by the Commission. They varied in odour and in amount of seeds and impurities. Some had entire leaves, in others they were broken up to a coarse powder. The bhangs from Bhagalpur and Monghyr had a marked peppermint odour, those from Bijapur and Sholapur had only a slight fragrance. The Khandesh sample was very much broken up and contained some seeds, while that from Amballa had its leaves twisted up like green-tea, and was remarkably free from seeds and foreign bodies. The samples from Surat and Hyderabad were much contaminated. In these cases the Surat bhang was powdered up and analysed just as it was received, and the Hyderabad mixture was sifted and the cleaned leaves only were used for analysis. The wild bhang from Assam had broad thin leaves, and a mousey odour. The leaves from the cultivated Rajshahi plants were lighter in colour, thicker, linear, with revolute margins, and a "herby" smell.

The samples of wild hemp plants were allied to those of bhang, but being in smaller quantities they were analysed by a different process. From Basti, North-Western Provinces, three interesting specimens were submitted—a sample of bhang with staminate flowers, female hemp called the "ganja plant", and male hemp called the "bhangi plant." From Gonda two plants representative of the sexes were sent. One was said to be obtained from Ammarpur, 21 miles east of Gonda, and was bearing staminate flowers; the other was a female plant from the same village in which the young fruits were developing. The specimen of wild hemp plant from Jaunpur, North-Western Provinces, consisted of leaves without any flowers or seeds and was stated to be used as ganja for smoking; but nothing definitely was known about this. Bhang does not seem to be sold in South India as a commercial article, but the leaves of the wild plants grown near houses are used by the natives for smoking. A specimen of such a plant was obtained from Pykara, on these hills, and its analysis resembles very strongly that of the wild bhang from Assam.

The samples of charas.—In Amballa district, charas "mashak" sells for Re. 1-8-0 per seer. It has a dark olive-green colour, tough consistence and a peculiar fragrant aroma. The Amritsar, Delhi and Bombay drugs are very much like the above, although called by different names, such as "mashak", "bhara" and "dust", and sold at prices ranging from 12 annas to Re. 1-9-0 per seer. Gwalior charas occurred in black balls from the size of a pea to that of a nutmeg. The sample from the wild plants in the Kumaon terai were spindle-shaped and about 1¼ inch long. They contained seeds and much vegetable matter, and were very probably obtained by rolling ganja in the hand. The Himalayan charas from Kumaon cultivated plants was in the form of large balls made by massing about a dozen small balls together. The Himalayan charas made from cultivated plants in Gurhwal was in two forms—flat, square-shaped pieces about ⅝ inch across, and round disc-shaped flattened pieces about 1 inch in diameter, with a hole in the middle by which they were strung together on a string. These had a heavy tobacco-like odour, and were black in colour. The Yarkand charas was a small hard cake weighing a few grains, sent in the samples of ganja and bhang from Allahabad. The Almora charas was a portion of a hard ball in which seeds and other vegetable debris were present. The two specimens from Nipal had the odour of musk. "A" was a sample of 1892 manufacture of good quality, and occurred in small rounded discs like Pontefract cakes. Sample "B" was two years old, and in cylindrical pieces, black and hard; it was called Shahjahani charas.

The methods of analysis.—The samples of ganja were broken up by hand, the stalks removed, and the loose seeds rejected, and the matted heads at the extremities of the smaller twigs were only taken. This "chur" was then powdered and made to pass through a sieve with 36 meshes to the linear inch, and the resulting powder was kept for use in a stoppered bottle. A tincture was made by macerating a weighed quantity of the powder for 48 hours with rectified spirit, percolating to exhaustion, and evaporating to dryness in a water-oven. The result would represent the amount of extract, the chief preparation of Indian hemp adopted by the pharmacopœias. The infusion was prepared by allowing five grammes of the powder to

* Kaniyambadi, North Arcot, a village not far from Vellore, where some of the dealers in Javadi ganja live.—*(C. Benson.)*

stand in warm water for a few hours. If cold water is used for the extraction, it requires more than 24 hours for complete saturation, and before that time the extract shows signs of fermentation. One portion of the watery extract was evaporated to complete dryness, another portion was precipitated with solution of acetate of lead to separate the organic acid, and the third portion, if sugar was present, was used to titrate a measured volume of Fehling's copper test. The nitrogen was determined by combustion with soda-lime, and existed in the plant mostly as albuminoids, although some was yielded by the alkaloids, and in some cases by a soluble salt of ammonium. The proximate analysis of ganja and bhang was commenced with ether, which is the best solvent for the active resins, and dissolves very little extraneous matter. The subsequent action of rectified spirit (sp : gr : 0·83) removed a resin acid, alkaloids, and in some cases a saccharine body reducing Fehling's solution. By adding together the ether extract and the resin acid, the result equals the amount of washed resin obtained by the direct spirit extract. If the spirit extract in the proximate analysis is much over 2 per cent., it points to the presence of sugar; absolute alcohol, on the other hand, does not dissolve this sugar so easily. Dr. Prain used petroleum ether for the first solvent to act upon the drug, and the dried extract obtained by this liquid was returned as "fixed oil, etc." If this were the case, then all the extracts of Indian hemp would consist mostly of fixed oil, whereas the extracts from all ganjas consist, as I shall show presently, of resins with a small proportion of fixed oil. Petroleum ether is a good solvent of the resins, and is of no use in effecting a separation between them and the oil. The best method is to separate the seeds from the sample before the analysis, and so exclude the source of the oil. A misconception seems to have arisen from a statement made by Roux, a French Chemist, in 1887, that the ethereal extract is inert. If the ethereal extraction follows that of petroleum ether, then, perhaps, the product is inert, but direct exhaustion of the drug with ether certainly does not yield inert resins. Dr. Prain estimated, by an indirect method, the essential oil in some samples of ganja, and obtained some high results, over 6 per cent. in most cases. Indirect methods of estimating volatile oils give higher figures than by direct distillation, and are not to be depended upon. I have recently distilled one of the most fragrant ganjas, that from the Kistna district, and it yielded less than one per cent. of colourless essential oil, having the peculiar odour of the drug. The essential oil in the other samples has not been determined. The remaining analytical methods do not require any further explanation.

Analyses of samples of Ganja (free from moisture).

	Direct spirit extract.	Direct water extract.	Organic acid.	Nitrogen.	Sugar.	Ether extract.	Spirit extract.	Water extract.	Crude fibre.	Total ash.	Ash soluble in water.	Ash soluble in acid.	Ash insoluble.	Alkalinity of ash as KHO.	(Moisture.)
Bengal.—Naogaon "chur"	25·90	13·80	4·72	3·23	traces.	23·27	2·63	9·52	47·63	19·18	2·81	9·34	7·03	1·01	9·0
,, "flat small twig"	23·84	14·53	5·59	3·39	traces.	20·90	2·32	12·52	50·93	16·20	1·94	9·31	4·95	·90	7·1
,, "flat large twig"	22·66	13·18	5·30	3·48	traces.	19·84	1·88	11·44	50·15	17·57	3·43	8·68	5·46	·83	6·7
,, "round"	21·80	14·42	5·01	3·46	traces.	19·52	1·82	10·99	52·02	18·72	3·91	9·08	5·73	1·08	9·2
North-Western Provinces.—Ghazipur "illicit" ...	19·00	18·10	4·16	...	2·66	14·80	4·53	14·24	47·00	19·44	2·72	13·00	3·72	·77	10·0
Basti	19·16	...	...	...	...	17·61	1·22	11·81	50·81	19·77	...	...	...	...	10·3
Sind.—Karachi (from Sholapur) 2nd	22·51	10·33	3·82	2·33	...	21·14	1·45	9·55	48·24	21·86	1·67	11·79	8·40	·61	7·1
,, (from Panvel) 1st	17·79	13·31	4·20	3·05	...	15·28	1·98	10·37	54·96	19·59	2·02	12·99	4·58	·92	8·4
Bombay.—Khandesh	19·43	14·36	4·48	2·42	...	17·90	1·88	12·52	49·93	18·89	2·80	11·61	4·48	·91	7·4
Satara	19·60	15·58	5·92	2·68	...	17·67	1·65	11·75	54·88	17·67	2·19	10·10	5·38	1·07	8·9
Ahmednagar, Rs. 55	19·06	14·15	4·96	2·80	...	17·23	1·37	11·32	54·90	20·94	2·45	11·81	6·68	·80	12·4
,, Rs. 50	18·39	12·22	3·90	2·93	...	16·64	1·33	10·43	55·23	20·09	1·87	11·54	6·68	·84	11·6
,, Rs. 48	16·19	12·39	4·66	3·18	...	14·39	2·30	10·24	55·39	21·79	2·38	12·42	6·99	1·08	9·8
Nasik	18·30	17·21	4·91	3·28	traces.	15·11	2·51	13·28	55·00	16·66	1·79	10·84	4·03	·61	8·2
Surat	17·38	12·88	4·05	2·81	...	15·04	3·33	9·42	58·60	19·38	2·44	12·22	4·72	1·21	10·0
Sholapur	16·14	13·31	4·20	3·05	...	14·46	1·89	11·20	57·09	19·65	2·83	11·96	4·86	1·23	8·4
Bijapur	17·19	15·98	5·45	2·98	traces.	14·33	2·20	12·84	54·46	17·19	2·26	11·02	3·91	·91	9·2
Central Provinces.—Nimar from Dhakalgaon seed	16·59	13·89	5·14	2·68	traces.	15·47	1·81	12·17	52·28	20·63	1·86	13·57	5·20	1·22	8·6
,, from local seed ...	18·20	14·52	5·18	3·13	traces.	16·36	2·09	12·19	53·17	17·85	2·40	11·79	3·66	1·07	8·4
Hyderabad	19·15	12·33	3·90	3·29	...	17·50	2·24	10·47	53·67	17·31	3·08	9·74	4·49	1·21	7·6
Madras.—Daggupad, Kistna District	31·00	24·17	4·97	2·67	4·31	25·13	7·86	13·18	38·86	14·97	1·75	11·04	2·18	1·07	8·5
,, ,, ,, ...	28·58	20·71	5·35	2·26	...	22·22	5·23	14·49	41·24	16·82	2·20	11·93	2·69	·98	7·30
Ootacamund "javathu"	26·15	21·42	4·77	2·72	5·42	21·68	9·73	10·88	47·45	14·33	2·44	9·16	2·73	1·14	9·8
,, "country ganja" ...	20·30	23·70	4·96	1·96	6·24	14·64	9·52	11·81	49·18	17·78	2·06	10·81	4·91	·94	9·7
Ganjam...	26·42	22·62	4·68	2·60	6·12	18·37	8·06	14·08	44·59	15·16	2·23	8·92	4·01	·93	10·3
Bangalore	23·54	18·52	4·85	2·51	5·02	18·50	4·76	13·25	50·67	15·91	1·85	10·57	3·49	1·07	8·2
Tanjore	24·10	18·83	4·82	2·69	6·58	17·37	8·90	11·39	44·93	20·66	1·77	10·36	8·53	·62	9·7
Madras City	21·00	20·56	4·60	2·27	6·15	13·92	6·90	14·28	47·00	19·58	1·62	12·17	5·79	1·21	7·6
Coimbatore	22·52	19·55	3·95	2·13	4·84	18·44	6·30	12·14	42·66	20·46	3·33	11·28	5·85	1·31	10·0
Pathar ganja	15·84	14·69	4·42	2·80	...	...	...	...	...	17·48	2·62	11·37	3·49	·98	8·5
Baluchar ganja	23·8	17·80	5·50	...	...	...	...	...	...	15·83	2·72	9·51	3·60	·90	8·2

Analyses of samples of Bhang (free from moisture).

	Direct spirit extract.	Direct water extract.	Organic acid.	Nitrogen.	Ether extract.	Spirit extract.	Water extract.	Crude fibre.	Total ash.	Ash soluble in water.	Ash soluble in acid.	Ash insoluble.	Alkalinity of ash as KHO.	(Moisture.)
Khandesh	13·36	16 35	5·34	2·23	12·63	1·76	12·73	48·14	27·32	2·12	15·90	9·30	·86	5·7
Hyderabad (cleaned)	13·36	10·43	3·61	2·80	12·22	1·51	8·32	52·00	28·40	3·20	16·90	8·30	1·12	12·8
Amballa	12·54	19·48	7·37	3·12	10·37	2·64	15·25	46·10	27·84	2·53	15·41	9·90	1·23	9·1
Sholapur	11·53	15·37	5·63	2·33	10·22	1·68	12·47	51·24	27·17	1·89	15·80	9·48	·80	7·6
Bhagalpur	13·70	18·80	5·40	2·86	10·04	2·06	16·59	50·07	24·74	2·19	15·06	7·49	·94	8·6
Bijapur	11·30	15·32	4·62	3·13	9·45	2·02	11·43	53·26	25·65	1·63	16·30	7·72	·76	8·0
Monghyr	12·88	16·47	4·75	2·89	9·17	2·21	13·85	52·32	26·09	2·92	15·97	7·20	1·22	9·5
Rajshahi (leaves from cultivated plants)	17·88	20·81	4·36	1·91	9·48	8·20	11·63	42·88	29·95	2·10	12·27	15·58	·99	7·2
Assam (from wild plants)	16·73	22·00	5·72	3·17	8·34	6·56	14·33	50·67	20·10	2·83	13·15	4·12	1·34	6·5
Surat (with impurities)	11·88	16·66	6·05	2·18	15·55	2·56	11·06	39·77	33·70	3·92	15·18	14·60	1·66	10·0
Allahabad, North-Western Provinces	16·52	16 82	4·63	...	12·41	1·57	15·00	49·00	23·66	2·56	13·80	7·30	1·04	6·2

Analyses of wild hemp plants (free from moisture).

	Spirit extract.	Washed resins.	Water extract.	Crude fibre.	Total ash.	Ash soluble in water.	Ash soluble in acid.	Insoluble ash.	(Moisture.)
Basti, North-Western Provinces, bhang with male flowers	9·60	8·00	13·10	54·96	23·94	...	...	...	11·4
,, ,, ,, female hemp, called the "ganja plant"	13·20	11·54	11·11	56·49	20·86	2·50	13·98	4·36	9·9
,, ,, ,, male hemp, called the "bhangi plant"	15·60	4·15	13·24	58·07	14·54	2·50	9·92	2·12	10·3
Gonda ,, ,, female plant	16·51	14·85	13·42	51·96	19·77	3·32	11·08	5·37	12·5
,, ,, ,, male plant, with male flowers	13·37	10·25	16·05	55·87	17·83	2·22	11·82	3·79	10·3
Jaunpur ,, ,, wild plant, leaves only	13·98	10·63	15·85	49·58	23·89	2·70	13·93	7·26	9·2
Pykara, Nilgiris, 6,000 feet, wild plant with leaves only	17·60	8·50	20·00	50·00	21·50	...	...	...	...

Analysis of Charas.

	Resins.	Vegetable matter.	Soluble ash.	Sand, etc.	Water.
Mashak, Amballa	42·7	12·9	12·4	26·2	5·8
Bhara, Amritsar	38·1	14·9	10·8	29·8	6·4
Mashak, „	46·5	12·6	10·0	27·3	3·6
Dust, Delhi, 12 annas	42·4	17·9	9·8	25·9	4·0
„ „ Re. 1-1-0	42·6	18·8	11·1	23·2	4·3
Mashak, Delhi, Re. 1-9-0 per seer ...	41·1	11·3	10·7	29·5	7·4
Bombay	36·1	20·2	11·8	27·3	4·6
Gwalior	43·3	27·7	8·2	17·7	3·1
Kumaon (wild)	22·3	52·0	9·3	7·4	9·1
„ (cultivated)	34·2	46·4	9·0	3·0	7·5
Gurhwal	41·9	37·0	7·9	5·5	7·7
Yarkand	40·0	18·2	23·9	11·4	6·5
Almora	36·9	40·5	10·5	4·6	7·5
Nipal	44·6	35·1	8·2	6·5	5·6
„ "Shahjahani"	44·4	37·8	9·6	4·1	4·2

Seeds in ganja.—Samples of ganja contain variable amounts of seeds, or, properly speaking, fruits. A fresh sample of "sadai" ganja from Coimbatore contained a large number of ripe fruits, and as it was said to afford commercial ganja, I carefully dried some of it in the sun, and separated the seeds from the other vegetable structures. The seeds weighed 56·5 per cent. of the dried sample, but if such a sample had been manufactured by being rolled or flattened out before it was dry, many of the seeds would have been lost. Some of the commercial samples of bhang contained much seed, notwithstanding the opinion that bhang is the produce of the male plant. The specimen of Hyderabad bhang, when cleaned, yielded 44 per cent. of seeds, with some stones and other impurities. In the case of a similarly impure specimen from Surat, the drug, after the larger stones had been removed, was powdered up with the seeds and other impurities. The analysis of such a sample shows an increase in the ether extract due to the oil, and an increase in the mineral matter due to the sand, and is far from uniform with the other specimens. Twelve commercial samples of Ganjam ganja, very different in appearance, were found to contain from 5·1 to 38·7 per cent. of seeds, or an average of 20 per cent. As the seeds contain 25 per cent. of fixed oil, five parts of the ether extract obtained from an average sample of such ganja, without removing the seeds, would consist of oil. In preparing samples of ganja and bhang for analysis the seeds that fell out in breaking up the drug were rejected altogether, and I do not think that, in the foregoing tables of analysis, more than a very small proportion of the resinous extract consisted of oil from the seeds.

Composition of the seeds.—The cleaned seeds, separated from the Hyderabad bhang, were reduced to fine powder, and analysed with the following results :

Fixed oil	25·60
Spirit extract (sugar, etc.)	2·95
Gum, etc.	4·05
Albuminoids	22·50
Crude fibre	29·45
Ash	9·25
Moisture	6·20
	100·00

The most recent and complete analysis of hemp seeds has been published by S. Frankfurt (*Landw Versuchs. Stat.* 43·143-182 *Journ. Chem. Soc.*, March 1894, p. 113). This examination, it must be pointed out, was made upon European seeds:—

Proteids	18·63
Nuclein, &c.	3·36
Lecithin	0·88
Cholesterol	3·07
Glycerides and free fatty acids	30·92
Cane sugar and other soluble carbohydrates	2·50
Crude fibre	26·33
Soluble organic acids	0·68
Ash	5 55
Not determined	11·03

The extracts of the seeds do not reduce Fehling's solution without previous boiling with an acid; the sugars found in the hemp drugs were therefore not derived from the seeds. The percentage of nitrogen (3·57) in the seeds is higher than that obtained in the ganjas and bhangs, a result which would be expected by any one having an acquaintance with vegetable physiology.

Sugar in hemp drugs.—The occurrence of sugar does not seem to have been noticed by other investigators. It was detected first in the samples sold in the local bazar at Ootacamund, and as it was absent from some Bombay samples, and appearing in traces in Bengal ganjas, adulteration was suspected. But as sugar occurred in all the Madras samples, and in pretty uniform quantity, and in the cultivated leaves from Rajshahi and the wild plants from Assam and the Nilgiris, it could not be considered anything else than a natural constituent. The nature of the sugar, besides being amorphous and allied to glucose in reducing potassio-cupric tartrate, was not investigated. An extract of ganja containing sugar, if prepared with rectified spirit, would after a time separate into two portions, a greenish-black resinous mass, and a brownish soft substance of a liquorice-like odour and sweetish taste. The presence of saccharine matter would not be desirable in a medicinal extract of Indian hemp, as it would dilute the active resinous matter; on the other hand, if present, it could easily be removed by washing with water.

Organic acids in hemp.—There is no tannic acid in any of the hemp drugs. The acid removed from the aqueous solutions by means of lead acetate resembled citric acid more than anything else, but as a loss was experienced in separating this in a state of purity, other acids might have been removed in the mother-liquors. Oxalate of calcium was present in all the samples and accounted for the large quantity of calcium carbonate present in the ashes. The larger the amount of solid aqueous extract in the drug, the higher was the proportion of the organic acid; but this rule is interfered with when sugar occurs in the extract. The percentage of oxide of lead in the lead compound of the organic acid ranged from 55 to 61 per cent. The colouring matter of the extract was also removed by lead acetate, but another substance giving a transient purplish colour with ferric chloride was left in solution.

Nitrogen.—The percentage of nitrogen ranged from 1·96 to 3·48 in the ganjas, and from 1·91 to 3·17 in the samples of bhang. In the case of ganjas the high percentage of nitrogen is generally accompanied with a large percentage of resins, but there are some remarkable exceptions to this rule. The best of the Madras samples, judging from the yield of resins, do not contain so much nitrogen as some Bombay samples inferior in resin contents. The Ahmednagar sample of the best quality and richest in resin contains the lowest amount of nitrogen and *vice versâ*. The two samples of Sind and those of Nimar have the higher proportion of nitrogen associated with the lower proportion of resin. The Naogaon ganjas contained alkaloids and ammonia in the aqueous solution of their spirit extracts. Ammonia was not detected in many of the other samples, and was absent altogether where the nitrogen was low. Ganja requires high cultivation, and no doubt in Naogaon and Daggupad, where the growth is well superintended, manure is largely used. Both the ganjas and bhangs contain more nitrogen than the average green fodder so extensively used. The crude fibre contained a considerable amount of nitrogen existing as insoluble albuminoid matter, as ammoniacal fumes were given off each time it was ignited.

The resins.—The best gauge of the resinous contents of the samples is to observe the percentage of "ether extracts" in the foregoing tables; the direct spirit extracts contain, as I have pointed out, variable amounts of water-soluble matters in addition to the resins. The Kistna ganja is the best in Madras, and the Madras city sample from Javadi hills is the worst.

The Naogaon ganjas, as a whole, are superior to the other supplies, with the exception of the Kistna sample, giving over 25 per cent. of resins. It is strange that in appearance as well as in composition the "first kind" of Sind ganja imported from Panvel should be inferior to the "second kind" imported from Sholapur. Another aspect of the ganja trade is the difference in the composition of samples said to come from the same place. The Sholapur ganja sold in Sind contains 21·14 per cent. of resins, while that from

the district or town itself yields 14·46 per cent. The ganjas from Ootacamund, Bangalore, Tanjore, and Madras city come from the Javadi hill, yet they yield 21·68, 18·5, 17·37, and 13·92 per cent. of resins respectively. The "country ganja" imported from Coimbatore and used on these hills contains 14·64 per cent. of resins, but a sample obtained from near the town of Coimbatore gave 18·44 per cent. We may learn from the analyses of the samples from Nimar in the Central Provinces that, whether from local or imported seed, the ganjas grown in the same district and under the same circumstances yield similar products. With regard to the nature of the resinous extract of ganja, it is insoluble in water, but soluble in alcohol with a neutral reaction. A small amount of resin acid, about half per cent., was present in all the samples of ganja and bhang. A certain amount of the resins dissolves in warm potash solution (one per cent.); a still further quantity is dissolved by treatment with alcoholic potash, evaporating to dryness, and washing the insoluble resin. Ganjas treated in this manner give from 50 to 60 per cent. of purified resin, and bhangs from 40 to 50 per cent. It is thus shown that the resinous extract of the bhangs is not equal, weight for weight, to that of the ganjas, as it contains a smaller proportion of purified resin which has been proved to be active. The bhangs contain from 8·34 to 12·63 per cent. of resins, or an average of about 10 per cent. which is one-half the amount yielded by average samples of ganja. Charas, it will be seen, contains, on an average of fifteen samples, about 40 per cent. resinous extract, which is double the quantity afforded by ganja.

The ash of ganja and bhang.—The amount and composition of the ash of hemp drugs is more uniform than those of tobacco. The proportion of total ash of ganja is generally under 20 per cent. If it is over this proportion, a glance at the figures under "insoluble ash" will show that it is due to an excess of sandy residue. The soluble ash (alkaline salts) does not exceed 3·43, nor fall below 1·67 per cent. The ash soluble in dilute hydrochloric acid (lime salts, etc.) falls between 13·57 and 8·68 per cent. The sand (insoluble ash) is the most variable constituent, as it ranges from 8·53 per cent. in the Tanjore sample to 2·18 per cent. in the Kistna drug. The alkalinity of the ash shows much attachment for the figure 1. The proportion of total ash in the samples of bhang in every case exceeds 20 per cent., a result which is due to the larger amounts of lime salts, as well as sand, than are found in the specimen of ganja. In the analyses of wild hemp plants, the male plants appear to yield more ash than the female plants, but the latter more resin. The composition of the Basti "bhangi plant" is not in keeping with the above statement, and is abnormal in yielding so much extract to spirit and so small a quantity of ash.

Following is an analysis of the ash of bhang from Bhagalpur:—

K_2O	CaO	MgO	Fe_2O_3	P_2O_5	SO_3	Cl.	SiO_2	CO_2
8·98	22·27	6·31	2·17	7·77	3·08	1·55	32·36	11·46

traces of manganese, undetermined, 4·06=100.

The analysis of the ash of "chur" ganja from Naogaon gave the following figures:—

K_2O	CaO	MgO	Fe_2O_3	P_2O_5	SO_3	Cl.	SiO_2	CO_2
10·42	21·66	5·46	3·21	7·67	2·31	0·96	36·00	7·33

traces of manganese, undetermined, 4·98=100.

There is a great similarity in the composition of the ash of ganja and bhang. They are both fairly rich in calcium phosphate, and the ash from ganja contains more potash than that of the bhang.

Remarks on charas.—Charas has very seldom been examined chemically. Flückiger and Hanbury, in "Pharmacographia," second edition, page 550, report that charas yields from one-quarter to one-third of its weight of an amorphous resin, and Dr. Prain in his report refers to samples yielding 75 and 78 per cent. of resin. It will be seen from the results of my analyses of North Indian samples that the average yield of resin is 40 per cent. The highest is 46·5 per cent. in "mashak" charas from Amritsar, and the lowest is 22·3 per cent. in a sample of charas made from wild plant grown in Kumaon. The latter sample has the composition of a good sample of ganja. The samples from Amballa, Amritsar, Delhi and Bombay are remarkably uniform in their composition and physical characters. They had a similar odour, consistence and colour, and all contained a large amount of sand. The Gwalior and Himalayan samples had portions of leaves and sometimes, seeds mixed with them, and left a quantity of vegetable residue after extraction with spirit, but there was not so much sand present. The Yarkand charas had some carbonate of calcium present, and the ash soluble in hydrochloric acid was consequently high. There was very little in the resin contents and appearance of the Delhi samples to determine their money value. The best quality had less resin and more sand than the other two kinds; it was more plastic and contained more water than they did. If alkaloids were the active principle of charas, then one would expect to find them in great abundance in this drug. But this is not so; some of the samples gave no indication of the presence of alkaloids, and the others only afforded traces. The amount of nitrogen is lower in charas than any other hemp drug. The Gwalior sample yielded 1·75 per cent. of nitrogen which apparently was derived from the vegetable matter, as the "mashak" of Amballa, which contained half the amount of insoluble vegetable matter, gave half the percentage of nitrogen (0·84 per cent).

Remarks on majum.—The confection of hemp known as majum is differently made in various parts of India. In the north it is made with white sugar, in the south it is made with brown sugar and mixed with so many spices and other ingredients that it is quite black.

Allahabad majum was a whitish soft mass of peculiar ghee-like odour, and containing vegetable debris similar to that from ganja. It contained 4 per cent. of ghee and 1·3 per cent. of vegetable matter insoluble in water. There was no trace of alkaloid present.

Benares majum was in cakes of the same colour and odour, and was nearly pure sugar. It contained 1·4 per cent. of fat, and 1 per cent. of leafy portions; no foreign seeds were discovered and no alkaloid could be detected.

Bombay majum was in the form of yellow-coloured cakes flavoured with spice, and with very little ganja. It contained 4·9 per cent. of ghee soluble in ether, and 2·7 per cent. of brown vegetable matter referable to cloves, cassia and saffron. No alkaloid was present.

Amballa majum was in opaque white masses with a slight greenish tinge and odour of ghee. It contained 7·3 per cent. of ghee soluble in ether, and no vegetable structures of a green colour as in other samples. No alkaloid was found.

Hyderabad majum was in the form of square cakes covered on one side with silvered paper. One kind was white and contained 2·3 per cent. of ghee, the other was coloured yellow with saffron and contained only 1·2 per cent. No seeds or vegetable structures were observed. This had been doubtless strained through a cloth before being boiled down. With these samples came a mixture, wrapped up in a leaf, of powdered raisins and white sugar. When this was examined, several other substances were found, such as pieces of almonds, seeds of various kinds, stamens of some plant, some cereal grains and spice. The little black seeds were further examined microscopically and were found to consist of two kinds, one with three angles, probably from a polygonaceous plant, and the others were, in very small quantity, the seeds of dhatura. This is the only sample in which I have found dhatura seed present.

Coimbatore, Ootacamund and Tanjore majums were black soft masses of a liquorice-like odour and sweet taste. An analysis was not attempted of either sample, but they were each broken down with water, and among the insoluble portion a search was made for dhatura seeds, nux vomica, etc., but without success. The amount of leafy organs, such as would come from the ganja, was in a very small proportion. In Ootacamund there is a black majum used for adults, and a white kind given to children, but as sold in the ganja-shop they are not very powerful preparations.

REPORT BY SURGEON-CAPTAIN J. F. EVANS, CHEMICAL EXAMINER TO THE GOVERNMENT OF BENGAL, REGARDING PHYSIOLOGICAL INVESTIGATIONS CONCERNING HEMP DRUGS.

I have the honour to submit herewith the report asked for in your letter No. 48, dated 18th August 1893, as amended by demi-official letter dated 1st November 1893, from Surgeon-Major Warden, to the Officiating Chemical Examiner to Government, Bengal, directing that the chemical analysis should be carried out by Mr. Hooper, Quinologist to the Government of Madras, and the physiological investigation in this laboratory.

A.—SPECIMENS OF HEMP DRUGS SENT FOR EXAMINATION CLASSIFIED ACCORDING TO THE LOCALITY WHENCE DERIVED.

The following samples of hemp drugs were received from you from time to time:—

Samples of ganja.

Ghazipur illicit ganja.
Sholapur ganja.
Khandesh „
Satara „ No. 1.
„ „ No. 2.
Ahmednugger ganja, No. 1.
„ „ No. 2.
„ „ No. 3.
Bijapur „
Nimar District „ Dhakalgaon seed.
„ „ „ local seed.
Kistna „
Bangalore „
Madras local market ganja.

Samples of bhang.

Khandesh bhang.
Amballa „
Sholapur „
Rajshahi „ (cultivated).
Assam „ (wild).
Satara „

Samples of charas.

Amballa charas, mashak No. 1.
„ „ „ No. 2.
Amritsar „ bhara.
„ „ (mashak).
Delhi District charas, dust 2nd class.
„ „ „ dust.
„ „ „ mashak.
Bombay charas.
Gwalior „ (made during process of ganja manufacture).
Kumaon „ (wild).
„ „ (cultivated).
Gurhwal „ No. 1.
„ „ No. 2 (cultivated).
Nepal „ A.
„ „ B.
„ „ (Shahjahani).

B.—SPECIMENS SELECTED AS STANDARD HEMP DRUGS.

Bengal round ganja of the season 1892-93, which had been carefully packed in a perforated deal-box and brought down to Calcutta from Nowgaon by Surgeon-Captain Prain in May 1893, was selected as the "standard ganja" with which the samples received from you were to be compared.

Bhagalpur imported siddhi of the season 1893, which was received from the Board of Revenue, Lower Provinces, Bengal, in April 1894, was utilised as the standard bhang with which the samples received from the Commission were to be compared.

C.—PREPARATION AND PERCENTAGE YIELD OF ALCOHOLIC EXTRACT.

1. Alcoholic extracts of the eighteen specimens of hemp drugs were prepared as follows:

The coarser stalks were removed, and the leaves, flowering stalks and finer stalks reduced in a mortar to a powder, which was passed through a sieve having fifty meshes to the inch. Twenty grammes of the fine powder thus prepared were macerated during a period exceeding one week in rectified spirit to form a tincture. One hundred cubic centimetres of the tincture evaporated over a water-bath to syrupy consistence, and subsequently dried in a hot oven till the weight became constant, gave the alcoholic extract.

2. The percentage yield of alcoholic extract obtained in the above manner was as follows :—

TABLE No. I.

		Percentage yield of alcoholic extract.	Dose of the alcoholic extract required to produce effects equal to those induced by the minimum dose of the extract of the standard ganja.	
	Samples of ganja.			
1	Bengal-Nowgaon round ganja, season 1892-93 (standard).	21·675	$\frac{1}{120,000}$ Part of the body weight.	
2	Ghazipur illicit ganja	14·60	$\frac{1}{70,000}$ Ditto.	
3	Sholapur ganja	14·625	$\frac{1}{120,000}$ Ditto.	
4	Khandesh ganja	18·675	$\frac{1}{120,000}$ Ditto.	
5	Satara ganja, No. 1	15·150	$\frac{1}{110,000}$ Ditto.	
6	Satara ganja, No. 2	14·40	$\frac{1}{110,000}$ Ditto.	
7	Ahmednagar ganja, No. 1	17·580	$\frac{1}{120,000}$ Ditto.	
8	Ahmednagar ganja, No. 2	16·35	$\frac{1}{110,000}$ Ditto.	
9	Ahmednagar ganja, No. 3	14·775	$\frac{1}{120,000}$ Ditto.	
10	Bijapur ganja	15·075	$\frac{1}{120,000}$ Ditto.	
11	Nimar District ganja, Dhakalgaon seed	16·725	$\frac{1}{120,000}$ Ditto.	
12	Nimar District ganja, local seed ...	16·875	$\frac{1}{120,000}$ Ditto.	
13	Kistna ganja	26·47	$\frac{1}{100,000}$ Ditto.	
14	Bangalore ganja	22·3125	$\frac{1}{110,000}$ Ditto.	
15	Madras local market ganja ...	20·10	$\frac{1}{100,000}$ Ditto.	
	Samples of bhang.			
16	Khandesh bhang	13·35	$\frac{1}{80,000}$ Ditto.	
17	Amballa bhang	11·40	$\frac{1}{100,000}$ Ditto.	
18	Sholapur bhang	9·825	$\frac{1}{60,000}$ Ditto.	
19	Bhagalpur bhang of 1893 (standard) ...	7·87	$\frac{1}{5,000}$ Ditto.	
20	Rajshahi bhang (cultivated) ...	.....	$\frac{1}{20,000}$ Ditto.	Percentage yield not known, these extracts having been prepared by Mr. Hooper.
21	Assam bhang (wild)	.....	$\frac{1}{5,000}$ Ditto.	
22	Satara bhang	10·6125	$\frac{1}{20,000}$ Ditto.	
	Samples of charas.			
23	Amballa charas, mashak No. 1 ...	39·075	$\frac{1}{100,000}$ Ditto.	
24	Amballa charas, mashak No. 2 ...	38·85	$\frac{1}{10,000}$ Ditto.	Samples Nos. 24, 25, 26, 27, 28, 29, and 30 were of very soft consistence, and could not be reduced to a powder even after drying at 100° C. for some hours.
25	Amritsar charas, bhara	35·6	$\frac{1}{90,000}$ Ditto.	
26	Amritsar charas, mashak	44·55	$\frac{1}{120,000}$ Ditto.	
27	Delhi District charas, dust, 2nd class ...	38·92	$\frac{1}{90,000}$ Ditto.	
28	Delhi District charas, dust	39·00	$\frac{1}{10,000}$ Ditto.	
29	Delhi District charas, mashak ...	41·62	$\frac{1}{100,000}$ Ditto.	
30	Bombay charas	33·37	$\frac{1}{20,000}$ Ditto.	
31	Gwalior charas (made during process of ganja manufacture).	35·3	$\frac{1}{5,000}$ Ditto.	
32	Kumaon charas (wild)	18·45	$\frac{1}{10,000}$ Ditto.	
33	Kumaon charas (cultivated) ...	33·75	$\frac{1}{5,000}$ Ditto.	
34	Gurhwal charas, No. 1	32·10	$\frac{1}{100,000}$ Ditto.	
35	Gurhwal charas, No. 2 (cultivated) ...	36·20	$\frac{1}{100,000}$ Ditto.	
36	Nipal charas, A.	42·80	No effect produced by doses equal to $\frac{1}{2,500}$ Part of the body weight of the animal.	
	Nipal charas, B.	32·60		
	Nipal charas (Shahjahani)	36·30		

D.—PHYSIOLOGICAL INVESTIGATION.

As directed in your letter above quoted, the first object of the physiological investigation was to ascertain the smallest dose of the alcoholic extract of the standard ganja which could be relied on to produce definite physiological effects. This having been learnt, the next part of the enquiry was to test the other samples by means of the knowledge thus acquired. Definite physiological action is understood to mean the production of such effects as are capable of clear recognition and definite description. In an investigation of this kind the drug must necessarily be administered to many animals of different weights; consequently if the results produced are to be of any comparative value, the doses given must always bear a proportion to the animal's weight.

It became evident, as the enquiry proceeded, that the same proportional dose could not be relied on to produce absolutely similar symptoms in different animals even of the same species. In different animals, even of the same species, the symptoms varied, not only in character, but also in degree. Further, the occurrence of symptoms of one kind either masked the occurrence or prevented the development of those of another.

Accordingly, the object aimed at was the discovery of the smallest proportional dose constantly attended by some definite physiological effect as opposed to marked physiological effect, and without desiring to produce effects of a constant type in every instance. The first duty was evidently to obtain by experiment some definite conception of the physiological action of the drug in small doses that may be termed minimal, and the need for this will become more apparent when the somewhat varying character of its action is described. The account of the physiological investigation is therefore naturally divided into—

1. The description of the physiological action of the drug as tested by means of the alcoholic extract of the standard ganja in minimal doses.
2. Adoption of a certain quantity of this substance proportional to the body weight as a standard minimum dose.
3. The physiological testing of the other samples of ganja as compared with the standard ganja.

Twenty-three administrations of the standard alcoholic extract were made before satisfactory minimum dose could be arrived at. One hundred and sixty-one administrations of the extract of the other hemp drugs were required in the work of testing their relative physiological properties. The animals utilised throughout were cats.

The weights of the cats and of the required doses of the extracts were taken according to the Avoirdupois scale. The method of administration was as follows:—

The animal was first carefully weighed in a bag of known weight, and then the required dose calculated from its body weight. The dose of the alcoholic extract was weighed out in a tared capsule, dissolved in a little alcohol and made into an emulsion with starch, the spirit being subsequently driven off by heating the emulsion thus formed on the water-bath. The emulsion was introduced into the stomach by means of a syringe and a small œsophageal tube.

Control experiments were made to test whether any portion of the effect produced might be due to alcohol retained in the emulsion. It will be seen from the record of the experiments that the amount of alcohol used produced no result when administered to cats.

A limited number only of cats was obtainable, that is, of cats suitable for experiments of the kind required; for it was important that they should be fairly tame and docile, well nourished and, if females, not pregnant: pregnancy would interfere with the correct body weight. The same animals were in consequence repeatedly utilised, a sufficient interval being allowed to elapse between consecutive doses.

1. PHYSIOLOGICAL ACTION OF THE DRUG AS TESTED BY MEANS OF THE ALCOHOLIC EXTRACT OF THE STANDARD GANJA IN MINIMAL* DOSES.

It will be better to describe, first, the nature of the effects produced by the drug, and then give in detail the experiments upon which this account is based. The symptoms observed roughly resolve themselves into three types, and subject to variation induced by idiosyncrasy, it may be said that the smallest dose of the drug capable of producing any appreciable effect will produce symptoms belonging to the first two types, or the dose being increased will induce symptoms of the first and third type, with a passing manifestation of those of the second. I have given the three types the following definition:—

(*a*) Symptoms of distress.

(*b*) Phenomena indicating disturbance of the sensory-motor mechanism.

(*c*) Soporific or narcotic effects.

* *Note.*— The term minimal doses as opposed to the minimum dose is adopted in order to indicate that all the doses given were small, the largest being $\frac{1}{65,000}$ of the body weight. The investigation is consequently restricted to the observation of the phenomena induced by such doses, and not by larger doses.

(*a*) *Symptoms of distress.*—Symptoms of distress or discomfort, as evinced by constant or peculiar cries usually preceded the development of the symptoms of the other types, the animal later on either displaying disturbance of the sensory-motor mechanism or falling gradually asleep. Symptoms of distress were in some instances the only effect induced. But such conditions are obviously so liable to misinterpretation, that to class them as definite physiological effects would be hardly admissible. Accordingly, where a condition to be described as one of distress was the sole effect, the dose administered is recorded as having failed to produce definite symptoms. As already stated, however, such symptoms, varying in the degree of their manifestation, almost invariably preceded those of the other types. It is difficult to describe the vocal sounds that may be emitted by a distressed cat, but one cry was occasionally heard from animals in this condition, which deserves a passing notice. It may be described as a high-pitched, prolonged wailing cry, and was particularly objected to by the laboratory staff, who informed me that the cry was unusual—and considered a sign of ill-luck in Bengali households.

(*b*) *Disturbance of the sensory-motor apparatus.*—Disturbance of the sensory-motor apparatus was manifested by the occurrence of unusual movements on the part of the animal, or by some apparent difficulty in maintaining its equilibrium on standing, or by the partial loss of motor power. The reference of all these manifestations to some effect produced by the drug on the sensory-motor apparatus may be objected to as arbitrary, especially as in the case of animals it is not possible to put the matter to the test in the same way as in man. But as the most important of the symptoms to be described under the above heading indicate interference with those muscular actions which go on for the most part independently of the will or reflexly, and as the other symptoms may be explained on the same hypothesis, though possibly incorrectly, it seems permissible to class these manifestations altogether.

Rocking movements.—It will be seen that the drug in minimum or larger doses constantly induced at some period of its action a peculiar and unusual rocking movement of the body upon its supports. These movements were very constant, not only in their character, but also in their occurrence. Their occurrence to a marked extent came to be regarded as the least admissible evidence of definite physiological effect. Coming on at a period subsequent to the administration of the drug, which varied with the amount of the dose and lasting a variable period, they were usually followed by either more marked sensory-motor disturbance or by sleep. Occasionally, though not usually, the production of these movements was almost the only effect induced by certain doses of the drug. The movements were apparently quite involuntary, and were best displayed when the animal was in the sitting or standing posture, disappearing when it lay down. They consist in a rhythmical side-to-side or backward and forward movement of the head, fore-quarters, and those portions of the body not in contact with the ground. In character they are regular, somewhat pendulum-like, the body moving as a whole; they last for a quarter to half a minute to intermit and be repeated again at irregular intervals, until the animal either recovers or passes into a condition of more marked sensory-motor disturbance or of sleep. They were observed to cease on voluntary movement or when the animal's attention was attracted, to begin again when the disturbance was withdrawn. The retention of the body in the semi-erect position assumed in the sitting posture is maintained by muscular action, which when once initiated by an effort of the will is continued unconsciously until the sensation of fatigue is experienced. Such actions require not only sufficient power in the muscular apparatus concerned, but depend also for their proper maintenance upon the stimulus derived from the muscular sense.

I would endeavour to explain the production of the peculiar movements already described on the hypothesis that some disturbance takes place in the motor mechanism referred to. Any cause producing inordinate action in one group of muscles or deficient action in another would upset the state of rest maintained by the balanced action of the different groups, and lead to the peculiar rocking movements described. There is no reason to suppose that inordinate action of one group of muscles is due to weakness of an opposing group, for the voluntary movements at this period show unimpaired power. Muscular mechanisms correlated in their action so as to produce a state of balance from their combined efforts, are understood to have the amount of their force largely controlled by impulses received from the muscular sense. Any interference with the muscular sense would account then for undue action on the part of one or other group of muscles, and the production of the rocking movements described. The movements are not of the kind that would suggest their causation by irritation of the cerebro-spinal centres, and their production on the hypothesis given is, I submit, supported by other manifestations which may reasonably be ascribed to sensory-motor disturbance. Doses of the drug in quantity equal to, or exceeding that amount adopted as the minimum dose, have been observed to almost invariably produce such movements as have been described. They succeed a period during which the animal usually evinces a degree of distress or uneasiness, and as a rule are followed by more marked sensory-motor disturbance, or by sleep when they cease. Though constant in occurrence and in character, they vary in the degree of their manifestation. The scope, duration and recurrence of the movements being more marked under certain conditions which, though not entirely independent of the quantity of the dose, seem largely associated with the idiosyncrasy of the individual.

It appeared if the dose relative to the body weight was such as would produce marked physiological effect short of pronounced sleep or narcotism, and if the individual idiosyncrasy

encouraged the development of the sensory-motor disturbance rather than of sleep, that then the involuntary rocking movements became most marked.

Besides the involuntary rocking movements described, other involuntary movements were occasionally observed, which are hardly to be explained on the same hypothesis. These other movements were of two kinds—fine tremor and spasmodic muscular actions. The tremor involved the whole body and was of intermittent character, an attack of tremor lasting three or four minutes with an indefinite period of complete freedom. Spasmodic muscular action was very rarely observed, and usually occurred in the muscles of the head and fore part of the body, the head being sometimes suddenly and forcibly moved to one or other side.

Difficulty in maintaining the body equilibrium on standing.—When the rocking movements had lasted a short time, the animals generally lay down in their habitual posture with their legs under them. This position apparently enabled them to obtain some respite from the involuntary movements: and in this position a considerable number fell asleep, the head gradually falling forwards till the nose and the face came in contact with the ground. In those cats not asleep a roll of the body from side to side was sometimes observed. Within a variable period of time, half an hour to an hour or even more, from the development of this condition, those cats which evinced no tendency to sleep, or were only drowsy, were frequently found, on being disturbed and made to stand up, to have apparently some difficulty in maintaining the equilibrium of the body in this position. The body swayed from side to side and backwards and forwards upon the legs, as though too heavy for its supports and likely to fall over. It was frequently difficult to induce animals in this condition to remain standing, but they were never observed to fall. On being induced to walk, it was found that this movement was either perfectly performed, the swaying of the body disappearing entirely, or that the action of the drug had produced an apparent partial loss of motor power.

Apparent loss of motor power.—In this condition the animal walked with a slow, tottering and uncertain gait, displaying shakiness and apparent weakness in its movements. It could not be induced to run; nor yet, on the other hand, was the loss of motor power ever complete.

The weakness was generally most evident in the hind limbs, though it never amounted to dragging of the limbs. The animal on walking would sway to one or other side, apparently tending to fall over, and occasionally, on attempting to turn, come down on its hind quarters and side. The fact that the hind limbs were more affected than the fore served sometimes to produce a very curious gait; for on walking the hind quarters fell out of line with the rest of the body, being as it were slued to one side. The peculiar appearance forcibly reminded me of the characteristic gait of horses suffering from *kumri*, many cases of which I saw in Upper Burma during 1887.

In a few instances the apparent loss of power was represented by a peculiar slow, crawling gait; the animal moving slowly along with its legs doubled up underneath the body and its belly close to the ground, as though to keep its centre of gravity low down. The loss of motor power has been described as apparent, and it is submitted that this is the correct description in the absence of more definite signs of loss of motor power. The phenomena described may, in the absence of definite signs of muscular paralysis, be accounted for by an interference with muscular movement, due to error of co-ordination induced by loss of muscular sense. It frequently happened that in the condition described as one of "difficulty in maintaining the body equilibrium on standing" no loss of motor power occurred. Further, that an effort of the will, as evinced in voluntary movement, was sufficient to restore the mechanism to its normal state, the difficulty, however, appearing again when the temporary excitement was withdrawn. The same observation was made with regard to the rocking movements which were found to cease on excitement or voluntary movement. It is natural, then, to endeavour to explain all these phenomena on the same hypothesis. The same observations as were advanced in explanation of the "rocking movements" apply with even more force to the state described as a "difficulty in maintaining the body equilibrium;" for somewhat similar conditions occur in disease affecting the muscular sense in man. I would suggest that the rocking movements and altered body equilibrium may be ascribed to the action of the drug upon the spinal cord, but that when apparent loss of motor power occurs, then the ganglionic centres at the base of the brain are also affected. The appearances appear to encourage the conception that the drug acts upon the central nervous structures and not upon the peripheral nerve endings. Those animals which displayed the maximum amount of sensory-motor disturbance evinced no tendency to sleep or loss of their usual instincts.

It has been already stated that the same cats were repeatedly utilised, and it thus came to be observed that, as regards the action of the drug, certain cats had a constant idiosyncrasy; that some cats under the influence of the drug were prone to sleep and others to the development of the phenomena ascribed to the disturbance of the sensory-motor apparatus; that the same dose relative to the body weight would in some animals induce disturbance of the sensory-motor mechanism and in others a varying degree of narcotism. Apart, however, from individual idiosyncrasy the quantity of the dose was found to play an important part also in determining the character of the effects produced by the drug. For in certain animals who after certain doses had been recognised as prone to develop sensory-motor disturbance, without marked sleep or narcotism, an increased dose, if sufficiently large, could be relied on to produce sleep deep

enough to mask or prevent the development of sensory-motor disturbance, with exception of the rocking movements.

It was to this action of the drug that reference was made in the statement that the "occurrence of symptoms of one kind either masked the occurrence or prevented the development of those of another."

(*c*) *Soporific or narcotic effects.*—As already said, sleep production depends on the quantity of the dose being influenced also by the individual idiosyncrasy: in some animals sleep was easily and early induced as the result of the minimum dose; in others not so readily. The duration and nature of the sleep depend on the quantity of the dose: it ranged from drowsiness to slight narcotism. At the onset of sleep the cat often strived to maintain the sitting posture, the head falling forwards now and again and the animal awaking with a start. As the tendency deepened it usually lay down and went to sleep, the head gradually falling forwards till the nose and front of the face rested on the ground.

Time of onset of symptoms.—Whatever their character might be, symptoms of the action of the drug could generally be recognised within one hour or one hour and a half after its administration. This statement applies only to the quantities given in this investigation, and naturally will not bear too general application. In my experiments the doses were always small, and hence the use of the term minimal.

Record of the first Series of Experiments with the Alcoholic extract of the Standard Ganja.

The quantity of the dose of the alcoholic extract usually given to small animals in physiological investigations seems to have been about one or two grains. The first two doses administered in this series of experiments were given without reference so much to the animal's body weight as to serve as a guide by which subsequent experiments might be regulated.

Experiment No. 1.—Well-nourished male cat, weight 4 lb 13½ oz.; a dose of the alcoholic extract, weighing ·25 grain, or about $\frac{1}{135,000}$ part of the body weight, given at 12-22 P.M. Effect *nil.*

Experiment No. 2.—Male, weight of cat 4 lb 12 oz.; a dose of the extract weighing ·5 grain, or $\frac{1}{66,500}$ part of the body weight, given at 11-15 A.M. 12-45 P.M. Rocking movements with slight weakness of the limbs, chiefly of the hind legs, on walking; condition lasted about one hour.

As a dose equivalent to $\frac{1}{66,500}$ of the body weight had induced definite symptoms, a similar quantity was next administered to two other cats to test whether the experiment was reliable:—

Experiment No. 3.—Yellow and white female cat, weight 7 lb 1 oz. ·75 grain of the extract, or a quantity equal to $\frac{1}{65,000}$ of the body weight, administered at 11-45 P.M. 12-40 P.M. Nodding of head, drowsiness. 1 P.M., rocking movements, with occasional slight tremor. 1-15 P.M., tendency to sleep more marked. Animal lying down asleep with the nose and face resting on the ground. 2 P.M., effects of the drug beginning to pass off.

Experiment No. 4.—Black and white cat, weight 3 lb 10¼ oz. ·38 grain of extract, or a quantity equivalent to $\frac{1}{66,000}$ of the body weight, administered at 12-10 P.M. 1-15 P.M., rocking movements; cat is sitting up and displays occasional attacks of tottering or irregular movements of the fore quarters and fore limbs, as though endeavouring to save itself from falling forwards; is slightly drowsy. 2 P.M., cat appears considerably distressed, is constantly mewing and suffering also from slight salivation. 3 P.M., beginning to recover, though still dull.

A dose equivalent to $\frac{1}{66,000}$ of the body weight being able to cause easily recognisable effects, the next step was to find out how far this dose could be diminished and yet definite symptoms induced. In the four following experiments the quantity of the extract given to each cat was equal to $\frac{1}{75,000}$ part of its body weight:—

Experiment No. 5.—Weight of cat 6 lb 11½ oz. Dose of extract ·63 grain at 1 P.M. 2-45 P.M., cat asleep with its nose on the ground, and though able to be disturbed by any noise in its neighbourhood, yet it soon went to sleep again. It remained in this sleepy state till 4 P.M. No rocking movements or tremor observed.

Experiment No. 6.—Weight of cat 3 lb 7¼ oz. Dose of extract ·32 grain at 1-25 P.M. 2-50 P.M., displays symptoms of distress and discomfort with slight drowsiness; is suffering also from slight salivation. 3 P.M., rocking movements. 4 P.M., the rocking movements have lasted with intermission since 3 P.M., being interrupted by occasional periods of sleep. 4-30 P.M., cat is still under the influence of the drug.

Experiment No. 7.—Weight of cat 3 lb 9½ oz. Dose of extract ·34 grain at 1-45 P.M. 3 P.M., sleepy; displays rocking movements of the body from time to time. Effects lasted for upwards of an hour.

Experiment No. 8.—Weight of cat 5 lb. 5½ oz. Dose of extract ·5 grain at 2 P.M. The action of the drug began to manifest itself about 3-30 P.M., when the cat became sleepy, but was disturbed by occasional spasmodic movements of the fore quarters. Very definitely affected, but less so than the other cats.

The dose was now reduced to $\frac{1}{90,000}$ of the body weight and that quantity of the extract administered to three cats.

Experiment No. 9.—Weight of cat 4 lb 12½ oz. Dose ·37 grain at 11-30 A.M. 12-10 P.M., distress and discomfort, pupils slightly dilated and the cat's appearance wild and suspicious; on being let loose the cat tries to hide itself. 12-30 P.M., displays weakness of the limbs, and can only be induced to walk with great difficulty; the weakness is more marked in the hind limbs; on walking the cat falls over occasionally its hind quarters, apparently due to the greater weakness of the hind limbs; there on is some tremor also of the whole body. 1-30 P.M., drowsy, but on being disturbed still showed the weakness of the limbs. 4-30 P.M., cat went to sleep about 2 P.M. with its nose resting on the ground and has continued to sleep with intermission during the last one and a half hours.

Experiment No. 10.—Weight of cat 2 lb 12¼ oz. Dose ·2 grain at 11-50 A.M. 12-30 P.M., excitement and distress with some slight occasional tremor of the whole body; slight dilatation of the pupils. 1 P.M., asleep. 3-30 P.M., is still under influence of the drug, and has been asleep with its nose resting on the ground during the past one and a half hours with occasional interruptions.

Experiment No. 11.—Weight of cat 3 lb 12¾ oz. Dose ·3 grain at 12-10 P.M. 12-50 P.M., rocking movements and drowsiness; 2 P.M., condition torpid; has broken periods of sleep. Effect less marked than in experiments Nos. 9 and 10.

Administration of three doses equivalent to $\frac{1}{100,000}$ part of the body weight.

Experiment No. 12.—Weight of cat 4 lb 7¼ oz. Dose of extract ·3 grain at 11-35 A.M. 12-55 P.M., rocking movements of the body; appearance of the animal altered by the drug; as it sits up it preserves a fixed look in the same direction as though somewhat dazed or stupefied. 1 P.M., asleep. 3-30 P.M., still asleep, but not deeply so, the appearance being that presented by natural sleep. This animal displayed no weakness of the limbs.

Experiment No. 13.—Weight of cat 5 lb 7¼ oz. Dose ·38 grain at 11-55 A.M. 1-30 P.M., animal very torpid and can be induced to move only with difficulty; when disturbed, it crawls about in a peculiar manner and seeks to hide itself; it walks in a very peculiar manner, shuffling along with the legs doubled up underneath the body and the belly close to the ground. 3 P.M., still under influence of the drug; some drowsiness and slight dilatation of the pupils.

Experiment No. 14.—Weight of cat 2 lb 11¼ oz. Dose ·18 grain at 12-15 P.M. 1-30 P.M., drowsiness; nodding of the head: the cat, which is a lively, very tame animal is now quite dull and torpid. 3 P.M. cat asleep with its nose on the ground and fully under the influence of the drug.

Three experiments with a dose the quantity of which was equal to $\frac{1}{110,000}$ of the body weight.

Experiment No. 15.—Weight of cat 4 lb ½ oz. Dose ·25 grain at 11-15 A.M. 1 P.M., asleep with its nose on the ground; on being disturbed walks with great difficulty, all the limbs being weak, but the hind limbs so weak that the animal tends to fall upon its hind quarters and side. 2-30 P.M., drowsy. 4 P.M., still under the influence of the drug, and has slept lightly off and on since 2-30 P.M.

Experiment No. 16.—Weight of cat 4 lb 5¼ oz. Dose ·27 grain at 11-30 A.M. 1-15 P.M., expression altered, the eye being glassy and the look fixed in one direction; rocking movements. 4 P.M., has been asleep with intermission for about two hours. While apparently asleep with its eyes closed occasionally emitted a peculiar and unpleasant cry.

Experiment No. 17.—Weight of cat 5 lb 6¼ oz. Dose ·34 grain at 11-50 A.M. 1-15 P.M., no effect apparent. 2-30 P.M. cat sleeping lightly and occasionally starting in its sleep in a peculiar manner. It is apparently only slightly affected by the drug, but on unfastening the string round its neck and inducing it to walk, it shows great weakness of the limbs, specially the hind limbs. It is unwilling to move, and when induced to do so, moves apparently with considerable difficulty. The gait is tottering and unsteady, the hind quarters falling occasionally upon the ground. 4-30 P.M., the weakness of the limbs is still very marked.

In the next two experiments the dose was reduced to $\frac{1}{150,000}$ part of the body weight.

Experiment No. 18.—Weight of cat 3 lb 11 oz.; Dose ·17 grain at 1-5 P.M. 2-30 P.M., on being let loose is very unwilling to move, and when induced to walk moves in a crawling, shuffling manner with its belly close to the ground. There appears to be slight weakness of the limbs.

Experiment No. 19.—Weight of cat 5 lb 5 oz. Dose ·25 grain at 1-25 P.M. 2-30 P.M., is very slightly affected, the hind limbs being apparently somewhat weak. It walks also in the peculiar crawling manner. But the effects must be described as very slight.

On the same day, at 1-15 P.M., a third cat received a dose of alcohol in quantity equal to that used to dissolve the alcoholic extract. The alcohol was mixed with a little water and administered in the usual manner. No apparent effect was produced. In preparing the emulsion as much alcohol as possible is driven off by heat after adding the starch solution. In this case the experiment being for purposes of control, no attempt was made to reduce the quantity of alcohol by heating.

The effects produced by a dose equal to $\frac{1}{110,000}$ part of the body weight appeared too pronounced, if other samples of hemp drugs were to be physiologically tested by this standard. And on the other hand the effects produced by a dose equal to $\frac{1}{150,000}$ part of the body weight appeared too indefinite and slight. It was accordingly determined to try the results produced by a dose equal to $\frac{1}{125,000}$ part of the body weight; and this quantity was given in the four next experiments.

Experiment No. 20.—Weight of cat 3lb 3½ oz. Dose ·18 grain at 11-45 A.M. 1 P.M., cat is evidently affected by the drug, rocking movements; 2-45 P.M., asleep, and on being disturbed displays weakness of the limbs. The sleep is somewhat deep and the cat evidently considerably affected by the dose of the drug.

Experiment No. 21.—Weight of cat 3 lb 15¾ oz. Dose ·22 grain at 12-15 P.M., 2-45 P.M., rocking movements of the body and weakness of the limbs; 3 P.M., asleep with its nose on the ground, and while asleep is apparently unable to maintain the recumbent posture, for it is occasionally woke up by a roll of the body to one or other side.

Experiment No. 22.—Weight 4 lb 2¼ oz. Dose ·23 grain at 12-45 P.M. 2-45 P.M., marked rocking movements of the body. 3 P.M., asleep. This animal definitely but not deeply affected by the drug.

Experiment No. 23.—Weight of cat 4 lb 14½ oz. Dose ·27 grain at 1-15 P.M. A portion of the dose was vomited immediately after administration. Notwithstanding rocking movements of the body, weakness of gait, and some torpor were observed as the result of the action of the drug.

2. The standard minimum dose.

The effects produced in cats by a quantity of the alcoholic extract of the standard ganja, equivalent to $\frac{1}{125,000}$ part of the body weight of each animal were considered sufficiently definite to warrant the adoption of this quantity as the minimum dose. For convenience of calculation, however, it was determined to take $\frac{1}{120,000}$ part of the body weight as the minimum dose, the difference between the two fractions being only $\frac{1}{3,000,000}$. Sufficient has been already said in the remarks preliminary to the record of the experiments regarding the characters of the effects which the minimum dose might be expected to produce. It was then premised that definite effects of some kind or another should be sought, rather than marked effects constant in character in every experiment. The subsequent experiments were conducted on the understanding that if the sample of hemp drugs under examination contained active constituents in quantity equal to that of the standard ganja that then the minimum dose of its alcoholic extract should induce somewhat the following symptoms, *i.e.*, a period of distress or discomfort, followed by the rocking movements of the body, and then either some of the other phenomena indicating sensory-motor disturbance or sleep.

3. Physiological examination of the samples of Hemp Drugs received from the Hemp Drugs Commission.

An epitome of the results will be given first, and then the record of experiments given in detail.

Hemp drugs possessing physiological properties equal to those of the standard ganja—

Sholapur ganja.
Khandesh ganja.
Ahmednagar ganja, No. 1.
" " No. 3.
Bijapur ganja.
Nimar District ganja, Dhakalgaon seed.
" " " local seed.
Amritsar charas, mashak.

Hemp drugs, the dose of which was increased to $\frac{1}{110,000}$ of the body weight of the animal, in order to produce effects equal to those of the minimum dose of the standard ganja—

Satara ganja, No. 1.
" " " 2.
Ahmednagar ganja, No. 2.
Bangalore ganja.

Hemp drugs of which the dose had to be increased to $\frac{1}{100,000}$ of the body weight—

Kistna ganja.
Madras local market ganja.
Amballa bhang.
Amballa charas, maskak, No. 1.
Delhi District charas, mashak.
Gurhwal charas, No. 1.
" " " 2.

Hemp drugs requiring a dose equal to $\frac{1}{90,000}$ part of the body weight—

Amritsar charas, bhara.
Delhi District charas, dust, 2nd class.

Hemp drugs of which a dose equal to $\frac{1}{80,000}$ part of the body weight was found to be sufficient—

Khandesh bhang.

Hemp drugs requiring a dose equal to $\frac{1}{70,000}$ part of the body weight in order to manifest action equal to that induced by the minimum dose of the extract of the standard ganja—

Ghazipur illicit ganja.

Hemp drugs requiring a dose equal to $\frac{1}{60,000}$ of the body weight—

Sholapur bhang.

Hemp drugs requiring a dose equal to $\frac{1}{20,000}$ part of the body weight—

Rajshahi bhang (cultivated).
Satara bhang.
Bombay charas.

Hemp drugs requiring a dose equal to $\frac{1}{10,000}$ part of the body weight.

Amballa charas, mashak, No. 2.
Delhi District charas, dust.
Kumaon charas (wild).

Hemp drugs requiring a dose equal to $\frac{1}{5,000}$ part of the body weight—

Bhagalpur bhang.
Assam bhang (wild).
Gwalior charas.
Kumaon charas (cultivated).

Hemp drugs the dose of which could not be determined—

Nepal charas A.
" " B.
" " (Shahjahani).

A tabular statement giving the above information is appended for more ready reference, see table No. II.

TABLE No. 11.

TABLE SHOWING THE RELATIVE PHYSIOLOGICAL VALUE OF THE VARIOUS SAMPLES OF HEMP DRUGS ACCORDING TO THE DOSE OF THE EXTRACT REQUIRED TO PRODUCE DEFINITE PHYSIOLOGICAL EFFECTS

Dose 1/120,000	Dose 1/110,000	Dose 1/100,000	Dose 1/90,000	Dose 1/80,000	Dose 1/70,000	Dose 1/60,000	Dose 1/20,000	Dose 1/10,000	Dose 1/5,000	Dose not determined.
Bengal-Nowgaon round ganja, season 1892-93 (standard).	Satara ganja No. 1	Kistna ganja ...	Amritsar charas, bhara.	Khandesh bhang	Ghazipur illicit ganja.	Sholapur bhang ...	Rajshahi bhang (cultivated).	Amballa charas, mashak, No. 2.	Bhagalpur bhang of 1893.	Nepal charas, A.
Sholapur ganja ...	,, ,, No. 2	Madras local market ganja.	Delhi district charas, dust (2nd class).	...	...	...	Satara bhang ..	Delhi district charas, dust.	Assam bhang (wild).	,, ,, B.
Khandesh ganja ...	Ahmednagar ganja, No. 2.	Amballa bhang ...	...	...	...	...	Bombay charas...	Kumaon charas (wild).	Gwalior charas...	,, ,, Shahjahani.
Ahmednagar ganja, No. 1...	Bangalore ganja...	Amballa charas, mashak (No. 1).	...	...	...	...	...	...	Kumaon charas (cultivated).	...
Ahmednagar ganja, No. 3...	...	Delhi district charas (mashak).	...	...	...	...	...	...	...	...
Bijapur ganja ...	...	Gurhwal charas, No. 1.	...	...	...	...	...	...	...	...
Nimar district ganja (Dhakalgaon seed).	...	Gurhwal charas, No. 2.	...	...	...	...	...	...	...	...
Nimar district ganja (local seed).	...	...	...	...	...	...	...	...	...	...
Amritsar charas, mashak ...	...	...	...	...	...	...	...	...	...	...

TABLE No. III.

Table showing the relative physiological value of the various samples of hemp drugs, calculated from the quantity of the alcoholic extract which is physiologically active.

Samples of ganja.		Samples of bhang.		Samples of charas.	
Kistna ganja	2·6	Amballa bhang ...	31	Amritsar charas, mashak ...	32
Standard ganja	2·5	Khandesh bhang ...	29	Delhi District charas, mashak	24
Bangalore ganja	2·4	Sholapur „ ...	15	Amballa charas, mashak, No. 1	23
Khandesh ganja	2·2	Satara „ ...	5	Gurhwal charas, No. 2 ...	21
Ahmednagar ganja, No. 1 ...	2	Bhagalpur „ ...	1	Delhi District charas, dust, 2nd class.	20
Madras local market ganja ...				Gurhwal charas, No. 1 ...	19
Nimar District ganja, Dhakalgaon seed.	1·9			Amritsar charas, bhara ...	
Nimar District ganja local seed				Bombay charas	4
Bijapur ganja	1·8			Delhi District charas, dust ...	2
Ahmednagar ganja, No. 2 ...	1·7			Amballa charas, mashak, No. 2	
Sholapur ganja				Kumaon charas (wild) ...	1
Ahmednagar ganja, No. 3 ...				Gwalior charas... ...	
Satara ganja, No. 1 ...	1·6			Kumaon charas (cultivated) ...	
„ „ „ 2 ...					
Ghazipur illicit ganja ...	1				

The numbers indicate the relation which the samples of ganja, bhang, or charas respectively bear to each other in each group separately. They do not indicate any relation between ganja and bhang or between either of these two and charas—thus Kistna ganja is 2·6 times as potent as Ghazipur illicit ganja and Amritsar charas, mashak, 32 times as potent as Gwalior charas. Amballa bhang is 31 times more powerful than Bhagalpur bhang.

Vide concluding remarks.

RECORD OF THE SECOND SERIES OF EXPERIMENTS.

(*a*) A dose of the alcoholic extract equal to $\frac{1}{120,000}$ part of the body weight was first tried in the case of every sample of the hemp drugs.

Experiment No. 1, Ghazipur illicit ganja.

Female cat, weight 5 lb 13¼ oz. Dose ·34 grains at 1-30 P.M. Effect *nil*.

Experiment No. 2, Sholapur ganja.

Weight of cat. 3 lb 1½ oz. Dose ·18 grain at 12-15 P.M., 1-15 P.M., slight tremor of body and appears uncomfortable. 2 P.M., dull and torpid; appears to have some difficulty in walking, though no weakness of the limbs to be made out; the appearance suggests the idea that the initiation of the act of walking is difficult and that sufficient voluntary impulse is not forthcoming. 3 P.M., asleep with its nose resting on the ground. 3-30 P.M., still asleep in the same position.

Experiment No. 3, Khandesh ganja.

Weight of cat 4 lb 12¾ oz. Dose ·28 grain at 12 noon. 1-30 P.M., rocking movements. 2 P.M., difficulty in walking with uncertainty of action most marked in the hind limbs. 3 P.M., drowsy; on walking displays staggering uncertain gait. 4 P.M., walks fairly well now, and is apparently recovering.

Experiment No. 4, Satara ganja, No. 1.

Weight of cat 4 lb 3 oz. Dose ·24 grain at 12-30 P.M. Slight rocking movements were observed, but the effects did not appear equal to those of the minimum dose of the standard extract. It was consequently determined to give a slightly larger quantity.

Experiment No. 5, Satara ganja, No. 2.

Weight of cat 2 lb 13¼ oz. Dose ·16 grain at 1-15 P.M. Effects produced very slight. A larger dose considered necessary.

Experiment No. 6, Ahmednagar ganja, No. 1.

Weight of cat 4 lb 13½ oz. Dose ·28 grain at 12-45 P.M. 1-30 P.M., cat is torpid and dull. 3 P.M., on being made to walk is found to have the characteristic staggering gait, the effect of the drug being more marked, as usual, in the hind limbs: it is distinctly drowsy. 3-30 P.M., the cat, on being disturbed and made to walk, takes a few steps and then passes into a sort of cataleptic condition, maintaining the posture in which it may have happened to be when it stopped moving. The position is not one in which its limbs are all at rest, and is sometimes slightly grotesque. 4 P.M., is still very evidently under the influence of the drug: on standing the rocking movements of the body are well displayed. The minimum dose of this extract produced very well marked effects.

Experiment No. 7, Ahmednagar ganja, No. 2.

Weight of cat 2 lb 11 oz. Dose ·15 grain at 1 P.M. Action not sufficiently marked. A larger dose necessary.

Experiment No. 8, Ahmednagar ganja, No. 3.

Weight of cat 3 lb 2¼ oz. Dose ·18 grain at 12-15 P.M. 2-30 P.M., sleepy; cries when disturbed, and walks in an awkward manner. 3 P.M., asleep with its nose on the ground, and on being disturbed walks unsteadily. 4-30 P.M., asleep.

Experiment No. 9, Bijapur ganja.

Weight of cat 3 lb 3¼ oz. Dose ·18 grain at 1-30 P.M. 2-10 P.M., very marked tremor of the body. 3-30 P.M., the tremor of the body is the most marked symptom in this case: it has lasted for more than one hour, subject to intermission, and is still present. Rocking movements have also been observed with occasional spasm of the body. The cat, on moving, walks with the peculiar crawling gait already described.

Experiment No. 10, Nimar ganja, Dhakalgaon seed.

Weight of cat 4 lb 13¼ oz. Dose ·28 grain at 12-30 P.M. 1-30 P.M., rocking movements. 3 P.M., cat less lively than usual; has a fixed look and is evidently not comfortable; no weakness of the limbs; drowsy but not markedly so.

Experiment No. 11, Nimar ganja, local seed.

Weight of cat 5 lb 1 oz. Dose ·29 grain at 12-45 P.M. 1-30 P.M., cat sleepy, torpid and cannot be induced to move. 3 P.M., unwillingness to move continues; when compelled to walk, moves with apparent difficulty, though no weakness of the limbs can be made out: some tremor of the body.

Experiment No. 12, Kistna ganja.

Grey cat male, weight 3 lb 3½ oz. Dose ·18 grains at 1-15 P.M. Slight effects produced.

Experiment No. 13, Bangalore ganja.

Weight of cat 4 lb 1½ oz. Dose ·23 grain at 12-30 P.M. Insufficient action manifested.

Experiment No. 14, Madras local market ganja.

Weight of cat 2 lb 13¼ oz. Dose ·16 grain at 1-15 P.M. Effect produced very slight.

Experiment No. 15, Khandesh bhang.

Weight of cat 3 lb 5¾ oz. Dose ·19 grain at 12-30 P.M. No appreciable effect.

Experiment No. 16, Amballa bhang.

Weight of cat 3 lb 13¾ oz. Dose ·22 grain at 1 P.M. No appreciable effect.

Experiment No. 17, Sholapur bhang.

Weight of cat 3 lb 4¾ oz. Dose ·19 grain at 1-10 P.M. No appreciable effect produced.

Experiment No. 18, Bhagalpur bhang.

Yellow and white male cat, weight 3 lbs 14¼ oz. Dose ·22 grain at 12-55 P.M. Effect *nil.*

Experiment No. 19, Rajshahi bhang (cultivated plant).

Yellow male cat, weight 5 lb 4½ oz. Dose ·3 grain at 12-30 P.M. Effect *nil.*

Experiment No. 20, Assam bhang (wild).

Black and white male cat, weight 4 lb 8¾ oz. Dose ·26 grain at 12-25 P.M. Effect *nil.*

Experiment No. 21, Satara bhang.

Weight of cat 3 lb 15¼ oz. Dose ·23 grain at 12-50 P.M. 3 P.M., *nil.* 4 P.M., *nil.*

Experiment No. 22, Amballa charas, mashak, No. 1.

Weight of cat 6 lb 4¼ oz. Dose ·36 grain at 1-30 P.M. Effect produced slight and insufficient.

Experiment No. 23, Amballa charas, mashak, No. 2.

Female cat, weight 6 lb 0¼ oz. Dose ·35 grain at 11-30 A.M. Effect *nil.*

Experiment No. 24, Amritsar charas, bhara.

Male cat, black and white, weight 4 lb 9½ oz. Dose ·26 grain at 11-40 A.M. Very slight effect produced.

Experiment No. 25, Amritsar charas, mashak.

Male cat, weight 4lb. 1¼ oz. Dose ·23 grain at 11-50 A.M. 12-30 P.M., rocking movements of body. 1 P.M., asleep with its nose on the ground. 2-30 P.M., still asleep; when disturbed displays marked rocking movements; its gait is not affected. 3-30 P.M., still under influence of the drug. The effect is considered equal to that produced by the minimum dose of the extract of the standard ganja.

Experiment No. 26, Delhi District charas, dust (2nd class).

Female cat, weight 3 lb 0¾ oz. Dose ·17 grain at 1-40 P.M. Effect *nil.*

Experiment No. 27, Delhi District charas, dust.

Male cat, weight 3 lb 3½ oz. Dose ·18 grain at 1-25 P.M. Effect *nil.*

Experiment No. 28, Delhi District charas, mashak.

Male cat, weight 6 lb 1¼ oz. Dose ·35 grain at 12-45 P.M. Effect *nil.*

Experiment No. 29, Bombay charas.

Male cat, weight 5 lb 6¾ oz. Dose ·31 grain at 12-10 P.M. Effect *nil.*

Experiment No. 30, Gwalior charas.

Male cat, weight 6 lb 5 oz. Dose ·37 grain at 12-40 P.M. Effect *nil.*

Experiment No. 31, Kumaon charas (wild).

Male cat, weight 5 lb 7 oz. Dose ·31 grain at 12-25 P.M. Effect *nil.*

Experiment No. 32, Kumaon charas (cultivated).

Female cat, weight 3 lb 9¼ oz. Dose ·2 grain at 12 noon. Effect *nil.*

Experiment No. 33, Gurhwal charas (No. 1).

White cat, female, weight 3 lb 7¾ oz. Dose ·2 grain at 1-40 P.M. 3 P.M., rocking movements of body fairly well marked. 4 P.M., sleepy; when disturbed displays rocking movements. Effect of the drug, though evident, not equal to that produced by minimum dose of the extract of the standard ganja.

Experiment No. 34, Gurhwal charas, No. 2 (cultivated).

Female cat, weight 6 lb 2¼ oz. Dose ·36 grain at 12-10 P.M. Effect *nil.*

Experiment No. 35, Nepal charas, A.

Female cat, weight 3 lb 6¼ oz. Dose ·19 grain at 12-20 P.M. Effect *nil.*

Experiment No. 36, Nepal charas, B.

Female cat, weight 2 lb 12¼ oz. Dose ·16 grain at 12-40 P.M. Effect *nil.*

Experiment No. 37, Nepal charas, Shahjahani.

Yellow and white female cat, weight 4 lb 6¾ oz. Dose ·25 grain at 2 P.M. Effect *nil.*

Satisfactory results having been obtained from the standard minimum dose in the case of eight samples of hemp drugs, the next step was to test what quantity of the other samples was required to produce effects equal to those produced by the minimun dose of the standard ganja.

(*b*) In the following experiments the dose was increased to $\frac{1}{110,000}$ of the body weight:—

Experiment No. 38, Satara ganja, No. 1.

Weight of cat 2 lb 11½ oz. Dose ·17 grain at 12 noon. 1 P.M., rocking movements; on standing up swaying of body from side to side; is somewhat drowsy. 1-15 P.M., spasmodic attacks of tremor of the head observed; the difficulty in maintaining the body equilibrium on standing is very marked. 1-30 P.M., asleep; 2-30 P.M., still much affected. 3-30 P.M., sleepy and torpid. 4 P.M., still under influence of the drug.

Experiment No. 39, Satara ganja, No. 2.

Weight of cat 2 lb 12 oz. Dose ·17 grain at 12-40 P.M. 2-30 P.M., rocking movements. 3-40 P.M., drops off to sleep now and again while in the sitting posture; has a "drugged" appearance; is evidently uncomfortable and in distress; body sways from side to side, displaying the condition termed a difficulty in maintaining the body equilibrium.

Experiment No. 40, Ahmednagar ganja, No. 2.

Weight of cat 3 lb 2½ oz. Dose ·2 grain at 11-40 A.M. 2 P.M., torpid and sleepy; gait weak. 2-10 P.M., asleep. 2-30 P.M., asleep and when disturbed found to be very unsteady on its legs. 3-30 P.M., asleep with its nose on the ground.

Experiment No. 41, Bangalore ganja.

Weight of cat 3 lb 12¾ oz. Dose ·24 grain at 12 noon. 1-10 P.M., vomited a small portion of the dose. 2 P.M., asleep with its nose on the ground. 3-30 P.M., on standing up displays great apparent difficulty in maintaining its equilibrium, the body swaying from side to side; is very definitely under the influence of the drug.

Experiment No. 42, Madras local market ganja.

Weight of cat 4 lb 11 oz. Dose ·29 grain at 12-45 P.M. The effect produced, though recognizable, not equal to that of the minimum dose of the standard.

Experiment No. 43, Khandesh bhang.

Weight of cat 3 lb 3¾ oz. Dose ·2 grain at 12-55 P.M. No appreciable effect.

Experiment No. 44, Amballa bhang.

Weight of cat 4 lb 2½ oz. Dose ·26 grain at 12-10 P.M. No appreciable effect.

Experiment No. 45, Sholapur bhang.

Weight of cat 3 lb 11½ oz. Dose ·23 grain at 11-45 A.M. No appreciable effect.

Experiment No. 46, Satara bhang.

Weight of cat 4 lb 11¼ oz. Dose ·29 grain at 12-25 P.M. Effects not appreciable.

Experiment No. 47, Amballa charas, No. 1.

Weight of cat 4 lb 10½ oz. Dose ·29 grain at 1-5 P.M. In this case insufficient effects were produced.

(*c*) The twenty-five following experiments were conducted with a dose equivalent to $\frac{1}{100,000}$ of the body weight :—

Experiment No. 48, Ghazipur illicit ganja.

Female cat, weight 2 lb 14 oz. Dose ·2 grain at 1-45 P.M. Effect *nil.*

Experiment No. 49, Kistna ganja.

Female white cat, weight 3 lb 7¼ oz. Dose ·24 grain at 1-15 P.M. Slight vomiting occurred after the dose. 3 P.M., asleep with its nose resting on the ground, and on being disturbed is found to be considerably affected; the rocking movements of the body are well marked, and on walking the animal staggers from side to side, the hind limbs being most affected. 4 P.M., is still under the influence of the drug.

Experiment No. 50, Madras local market ganja.

Weight of cat 2 lb 11½ oz. Dose ·19 grain at 1-15 P.M. 3-30 P.M., sleepy; but on being disturbed displays rocking movements and very marked swaying of body from side to side.

Experiment No. 51, Khandesh bhang.

Weight of cat 4 lb 1 oz. Dose ·28 grain at 1-10 P.M. Effect almost *nil.*

Experiment No. 52, Amballa bhang.

Weight of cat 3 lb 1 oz. Dose ·21 grain at 1-30 P.M. 2-45 P.M., distinctly sleepy and evinces great unwillingness to move on being disturbed; when compelled to move, walks in a shuffling, crawling manner. 4 P.M., still sleepy and torpid, but will come when called, though it moves as though with effort in a slow, crawling manner. The effect therefore appears to be passing off.

Experiment No. 53, Sholapur bhang.

Weight of cat 6 lb 2¾ oz. Dose ·43 grain at 12-25 P.M. Effect almost *nil.*

Experiment No. 54, Bhagalpur bhang.

Male cat, weight 4 lb 11½ oz. Dose ·33 grain at 1-10 P.M. Effect *nil.*

Experiment No. 55, Rajshahi bhang (cultivated).

Male cat, weight 4 lb 2 oz. Dose ·28 grain at 12-45 P.M. Effect *nil.*

Experiment No. 56, Assam bhang (wild).

Female cat, weight 4 lb 12 oz. Dose ·33 grain at 1 P.M. Effect *nil.*

Experiment No. 57, Satara bhang.

Weight of cat 3 lb 3½ oz. Dose ·22 grain at 12-35 P.M. Effect *nil.*

Experiment No. 58, Amballa charas, mashak, No. 1.

Weight of cat 2 lb 9 oz. Dose ·17 grain at 2 P.M. 3 P.M., rocking movements of the body. 3-30 P.M., animal is distinctly under the influence of the drug, manifested by the swaying of the body from side to side. 4 P.M., the cat comes when called and walks well and strongly without tottering, but when allowed to stand or sit undisturbed displays marked swaying of the body from side to side and backwards and forwards upon its supports.

Experiment No. 59, Amballa charas, mashak No. 2.

Female cat, weight 6 lb 5¼ oz. Dose ·44 grain at 11-45 A.M. Effect *nil.*

Experiment No. 60, Amritsar charas, bhara.

Male cat, weight 4 lb 14¼ oz. Dose ·34 grain at 11-55 A.M. Effect *nil.*

Experiment No. 61, Delhi District charas, dust (2nd class).

Tortoise-shell female cat, weight 5 lb 13½ oz. Dose ·4 grain at 1-15 P.M. Effect *nil.*

Experiment No. 62, Delhi District charas, dust.

Yellow and white male cat, weight 4 lb 2¼ oz. Dose ·29 grain at 12-45 P.M. Effect *nil.*

Experiment No. 63, Delhi District charas, mashak.

Grey and white female cat, weight 4 lb. 10 oz. Dose ·32 grain at 12-35 P.M. 1-30 P.M., much rocking of the body, but can walk well. 2 P.M., swaying of body from side to side on standing, so long as its attention is not attracted; the hind quarters chiefly affected. 3 P.M., rocking and swaying of body continues, the animal walks stiffly but fairly well; 4 P.M., still under the influence of the drug.

Experiment No. 64, Bombay charas.

Female cat, weight 3 lb ¼ oz. Dose ·21 grain at 12-20 P.M. Effect *nil.*

Experiment No. 65, Gwalior charas.

Female cat, weight 2 lb 12¼ oz. Dose ·19 grain at 1-40 P.M. Effect *nil.*

Experiment No. 66, Kumaon charas (wild).

Female cat, weight 3 lb 7¼ oz. Dose ·24 grain at 1-5 P.M. Effect *nil.*

Experiment No. 67, Kumaon charas (cultivated).

Male cat, weight 3 lb 5¾ oz. Dose ·23 grain at 12-15 P.M. Effect *nil.*

Experiment No. 68, Gurhwal charas, No. 1.

Male cat, weight 3 lb 2½ oz. Dose ·22 grain at 2 P.M. 3 P.M., cat is very evidently affected, displaying the rocking movements of the body and the staggering gait on walking. 4 P.M., still under the influence of the drug.

Experiment No. 69, Gurhwal charas, No. 2 (cultivated).

Male cat, weight 3 lb 2½ oz. Dose ·22 grain at 1-30 P.M. 3 P.M., animal very much affected, is very unwilling to walk, and on being induced to move after a few steps falls over on its side, the hind quarters, as usual, being most affected; rocking and swaying of the body from side to side on standing; is apparently unable to stand long; torpid, but not sleepy. 3-30 P.M., asleep with its nose on the ground. 4 P.M., still under the influence of the drug.

Experiment No. 70, Nepal charas, A.

Female cat, weight 3 lb 10¼ oz. Dose ·25 grain at 12-22 P.M. Effect *nil.*

Experiment No. 71, Nepal charas, B.

Yellow male cat, weight 5 lb 2½ oz. Dose ·36 grain at 12-20 P.M. Effect *nil.*

Experiment No. 72, Nepal charas, Shahjahani.

Female cat, weight 3 lb 5½ oz. Dose ·23 grain at 1-10 P.M. Effect *nil.*

(*d*) The following experiments were conducted with a dose equivalent to $\frac{1}{90,000}$ part of the body weight.

Experiment No. 73, Ghazipur illicit ganja.

White female cat, weight 3 lb 8¼ oz. Dose ·27 grain at 1-45 P.M. Effect *nil.*

Experiment No. 74, Khandesh bhang.

Weight of cat, 7 lb 8½ oz. Dose ·58 grain at 12 noon. Effects not sufficiently definite.

Experiment No. 75, Sholapur bhang.

Weight of cat 6 lb 3½ oz. Dose ·48 grain at 11-30 A.M. Effect practically *nil.*

Experiment No. 76, Bhagalpur bhang.

Male cat, weight 4 lb 13¼ oz. Dose ·37 grain at 1-55 P.M. Effect *nil.*

Experiment No. 77, Rajshahi bhang.

Male cat, weight 4 lb 4¼ oz. Dose ·32 grain at 2 P.M. Effect *nil.*

Experiment No. 78, Assam bhang.

Male cat, weight 5 lb 8¾ oz. Dose ·43 grain at 2-15 P.M. Effect *nil.*

Experiment No. 79, Satara bhang.

Weight of cat 4 lb 1¾ oz. Dose ·32 grain at 11-45 A.M. Effect practically *nil.*

Experiment No. 80, Amballa charas, mashak, No. 2.

Female cat, weight 5 lb 15¼ oz. Dose ·46 grain at 2-30 P.M. Effect *nil.*

Experiment No. 81, Amritsar charas, bhara.

Female cat, weight 4 lb 11¾ oz. Dose ·36 grain at 2-30 P.M. 4 P.M., very marked rocking of the body and swaying from side to side on standing; walks very fairly well. 4-30 P.M., still much under the influence of the drug; walk slightly affected.

Experiment No. 82, Delhi District charas, dust (2nd class).

Female cat, weight 2 lb 3¼ oz. Dose ·17 grain at 2-35 P.M. 4 P.M., displays rocking and swaying of the body; on walking tends to fall upon its side.; 4-30 P.M., walks with difficulty.

Experiment No. 83, Delhi District charas, dust.

Male cat, weight 5 lb 10 oz. Dose ·43 grain at 11-45 A.M. Effect *nil.*

Experiment No. 84, Bombay charas.

Female cat, weight 5 lb 15½ oz. Dose ·46 grain at 11-50 A.M. Effect *nil.*

Experiment No. 85, Gwalior charas.

Male cat, weight 5 lb. ½ oz. Dose ·39 grain at 11-55 A.M. Effect *nil.*

Experiment No. 86, Kumaon charas (wild).

Female cat, weight 3 lb 6¼ oz. Dose ·26 grain at 12-15 P.M. Effect *nil.*

Experiment No. 87, Kumaon charas (cultivated).

Female cat, weight 3 lb 1¼ oz. Dose ·23 grain at 12-25 P.M. Effect *nil.*

Experiment No. 88, Nepal charas, A.

Female cat, weight 3 lb 10½ oz. Dose ·28 grain at 12-30 P.M. Effect *nil.*

Experiment No. 89, Nepal charas, B.

Male cat, weight 4 lb 8½ oz. Dose ·35 grain at 12-55 P.M. Effect *nil.*

Experiment No. 90, Nepal charas, Shahjahani.

Female cat, weight 4 lb 12½ oz. Dose ·37 grain at 1 P.M. Effect *nil.*

(*e*) Four experiments in which the dose was increased to $\frac{1}{80,000}$ of the body weight.

Experiment No. 91, Khandesh bhang.

Weight of cat 3 lb. 1 oz. Dose ·26 grain at 1-15 P.M. 1-40 P.M., *nil.* 3 P.M., asleep with its nose on the ground; on being disturbed displays swaying of body from side to side on standing. 3-30 P.M., asleep with its head on the ground; is, however, easily disturbed. 4 P.M., asleep; when disturbed and induced to walk its gait is tottering and unsteady.

Experiment No. 92, Sholapur bhang.

Weight of cat 3 lb 4¾ oz. Dose ·28 grain at 12-40 P.M. Effect *nil.*

Experiment No. 93, Satara bhang.

Weight of cat 6 lb 5¼ oz. Dose ·55 grain at 1 P.M. Effect *nil.*

Experiment No. 94, Kumaon charas (cultivated).

Female cat, weight 3 lb 8¾ oz. Dose ·31 grain at 12 noon. Effect *nil.*

(*f*) The following experiments were conducted with a dose equivalent to $\frac{1}{70,000}$ of the body weight.

Experiment No. 95, Ghazipur illicit ganja.

Male cat, weight 5 lb 14 oz. Dose ·58 grain at 11-10 A.M. 2-30 P.M., animal distinctly affected, pupils somewhat dilated, rocking of body on sitting up; walks slowly and with apparent difficulty, but without staggering; on standing body sways from side to side. 3 P.M., effect persists. 4 P.M., animal almost recovered.

Experiment No. 96, Sholapur bhang.

Weight of cat 6 lb 3¾ oz. Dose ·62 grain at 11 A.M. 12-30 P.M., *nil.* 1-45 P.M., slight rocking movements. 2-30 P.M., slight rocking movements of body. Effect not sufficiently marked.

Experiment No. 97, Bhagalpur bhang.

Female cat, weight 6 lb. Dose ·6 grain at 11-30 A.M. Effect *nil.*

Experiment No. 98, Rajshahi bhang.

Female cat, weight 4 lb 14 oz. Dose ·48 grain at 11-35 A.M. Effect *nil.*

Experiment No. 99, Assam bhang.

Male cat, weight 3 lb 5½ oz. Dose ·33 grain at 11-40 A.M. Effect *nil.*

Experiment No. 100, Satara bhang.

Weight of cat 3 lb 5¼ oz. Dose ·33 grain at 11-35 A.M. Effect *nil.*

Experiment No. 101, Amballa charas, mashask, No. 2.

Female cat, weight 3 lb 2 oz. Dose ·31 grain at 12-5 P.M. Effect *nil.*

Experiment No. 102, Delhi District charas, dust.

Female cat, weight 3 lb 8¾ oz. Dose ·35 grain at 12-10 P.M. Effect *nil.*

Experiment No. 103, Bombay charas.

Male cat, weight 4 lb 8 oz. Dose ·45 grain at 12-45 P.M. Effect *nil.*

Experiment No. 104, Gwalior charas.

Male cat, weight 5 lb 2 oz. Dose ·51 grain at 12-50 P.M. Effect *nil.*

Experiment No. 105, Kumaon charas (wild).

Female cat, weight 3 lb 11 oz. Dose ·37 grain at 1 P.M. Effect *nil.*

Experiment No. 106, Nepal charas, A.

Male cat, weight 5 lb 3½ oz. Dose ·52 grain at 12-10 P.M. Effect *nil.*

Experiment No. 107, Nepal charas, B.

Female cat, weight 5 lb 15¼ oz. Dose ·6 grain at 12-20 P.M. Effect *nil.*

Experiment No. 108, Nepal charas, Shahjahani.

Male cat, weight 5 lb 7½ oz. Dose ·54 grain at 12-45 P.M. Effect *nil.*

(*g*) Six experiments with a dose equivalent to $\frac{1}{60,000}$ part of the body weight —

Experiment No. 109, Sholapur bhang.

Weight of cat 3 lb 13¼ oz. Dose ·44 grain at 11-15 A.M. 12-30 P.M., sleepy, and on being disturbed and made to stand, manifests swaying of the body from side to side. 1-45 P.M., asleep with its face resting on the ground; when disturbed walks well, but cannot maintain a steady equilibrium on standing; the weakness is more marked in the hind limbs, the fore limbs appearing to be steady; the body sways from side to side on the hind supports rather than on the fore. 2-30 P.M., still under influence of drug, but can walk well.

Experiment No. 110, Rajshahi bhang.

Male cat, weight 3 lb 9¼ oz. Dose ·4 grain at 1-15 P.M. Effect *nil.*

Experiment No. 111, Assam bhang.

Female cat, weight 2 lb 5¾ oz. Dose ·27 grain at 1-20 P.M. Effect *nil.*

Experiment No. 112, Satara bhang.

Weight of cat 4 lb 3½ oz. Dose ·49 grain at 11-55 A.M. Effect *nil.*

Experiment No. 113, Amballa charas, mashak, No. 2.

Female cat, weight 3 lb 0½ oz. Dose ·35 grain at 1-35 P.M. Effect *nil.*

Experiment No. 114, Kumaon charas (cultivated).

Female cat, weight 3 lb 10 oz. Dose ·42 grain at 12-10 P.M. Effect *nil.*

(*h*) Thirteen experiments with a dose equivalent to $\frac{1}{50,000}$ part of the body weight—

Experiment No. 115, Bhagalpur bhang.

Female cat, weight 3 lb 3¾ oz. Dose ·45 grain at 12-55 P.M. Effect *nil.*

Experiment No. 116, Rajshahi bhang.

Male cat, weight 4 lb 9½ oz. Dose ·65 grain at 12-20 P.M. Effect *nil.*

Experiment No. 117, Assam bhang.

Male cat, weight 5 lb 2 oz. Dose ·71 grain at 1-25 P.M. Effect *nil.*

Experiment No. 118, Satara bhang.

Weight of the cat, 4 lb 2¾ oz. Dose ·58 grain at 11-50 A.M. Effect *nil.*

Experiment No. 119, Amballa charas, mashak, No. 2.

Female cat, weight 6 lb 2½ oz. Dose ·86 grain at 1-30 P.M. Effect *nil.*

Experiment No. 120, Delhi District charas, dust.

Female cat, weight 4 lb 10 oz. Dose ·64 grain at 1-40 P.M. Effect *nil.*

Experiment No. 121, Bombay charas.

Male cat, weight 4 lb 7½ oz. Dose ·62 grain at 1-45 P.M. Effect *nil.*

Experiment No. 122, Gwalior charas.

Male cat, weight 5 lb 14 oz. Dose ·82 grain at 1-33 P.M. Effect *nil.*

Experiment No. 123, Kumaon charas (wild).

Female cat, weight 4 lb 13½ oz. Dose ·67 grain at 1-55 P.M. Effect *nil.*

Experiment No. 124, Kumaon charas (cultivated).

Male cat, weight 3 lb 10½ oz. Dose ·51 grain at 12-15 P.M. Effect *nil.*

Experiment No. 125, Nepal charas, A.

Male cat, weight 5 lb 7 oz. Dose ·76 grain at 11-30 A.M. Effect *nil.*

Experiment No. 126, Nepal charas, B.

Male cat, weight 3 lb 8 oz. Dose ·49 grain at 12 noon. Effect *nil.*

Experiment No. 127, Nepal charas, Shahjahani.

Male cat, weight 4 lb 8½ oz. Dose ·63 grain at 12-5 P.M. Effect *nil.*

(*i*) One experiment with a dose equivalent to $\frac{1}{40,000}$ part of the body weight.

Experiment No. 128, Satara bhang.

Weight of the cat, 4 lb 11½ oz. Dose ·82 grain at 12-5 P.M. Effect very slight.

(*j*) One experiment with a dose equivalent to $\frac{1}{30,000}$ part of the body weight.

Experiment No. 129, Satara bhang.

Weight 3 lb 1½ oz. Dose ·72 grain at 12-15 P.M. 2 P.M., dull and torpid; walks slowly and with apparent effort. Effect soon passed off and was not sufficient.

(*k*) Twelve experiments with a dose equivalent to $\frac{1}{20,000}$ part of the body weight.

Experiment No. 130, Bhagalpur bhang.

Female cat, weight 5 lb 12 oz. Dose 2 grains at 12-10 P.M. Effect *nil.*

Experiment No. 131, Rajshahi bhang.

Female cat, weight 3 lb 7¾ oz. Dose 1·2 grains at 12-45 P.M. 1-20 P.M., asleep with nose on the ground; when disturbed displays marked rocking and swaying of the body. 3 P.M., asleep and on being aroused shows evidence of effect of the drug in the swaying and rocking of the body; it walks also with some little difficulty. 4 P.M., still under the influence of the drug.

Experiment No. 132, Assam bhang.

Male cat, weight 4 lb 10 oz. Dose 1·6 grains at 1 P.M. Effect *nil.*

Experiment No. 133, Satara bhang.

Weight of cat 3 lb 12½ oz. Dose 1·32 grains at 12-30 P.M. 2 P.M., tremor of body; on standing up sways from side to side; gait somewhat unsteady. 3 P.M., staggering, unsteady gait; tends to fall on turning round. 4 P.M., still under the influence of the drug; can walk steadily and well, but on standing, if undisturbed, rocks from side to side in the manner so often described.

Experiment No. 134, Amballa charas, mashak, No. 2.

Female cat, weight 4 lb 8 oz. Dose 1·5 grains at 1-10 P.M. Effect *nil.*

Experiment No. 135, Delhi district charas, dust.

Female cat, weight 3 lb 4¾ oz. Dose 1·1 grains at 1-30 P.M. Slight effect produced.

Experiment No. 136, Bombay charas.

Female cat, weight 3 lb 3¾ oz. Dose 1·13 grains at 1-40 P.M. 2-30 P.M., rocking and swaying of body. 3 P.M., asleep with its nose on the ground; on being disturbed displays rocking and swaying of the body from side to side with the characteristic gait. Soon went to sleep when allowed 4 P.M., still under the influence of the drug.

Experiment No. 137, Gwaliar charas.

Female cat, weight 3 lb 7¾ oz. Dose 1·2 grains at 1-10 P.M. Effect *nil.*

Experiment No. 138, Kumaon charas (cultivated).

Female cat, weight 4 lb 8 oz. Dose 1·57 grains at 1-40 P.M. Effect *nil.*

Experiment No. 139, Nepal charas, A.

Male cat, weight 5 lb 7 oz. Dose 1·9 grains at 11-55 A.M. Effect *nil.*

Experiment No. 140, Nepal charas, B.

Male cat, weight 3 lb 8 oz. Dose 1·22 grains at 12 noon. Effect *nil.*

Experiment No. 141, Nepal charas, Shahjahani.

Male cat, weight 4 lb 8½ oz. Dose 1·58 grains at 1 P.M. Effect *nil.*

(*l*) Ten experiments with a dose equivalent to $\frac{1}{10,000}$ part of the body weight.

Experiment No. 142, Bhagalpur bhang.

Female cat, weight 5 lb 12 oz. Dose 4 grains at 11-50 A.M. Effect *nil.*

Experiment No. 143, Assam bhang.

Male cat, weight 4 lb 10 oz. Dose 3·23 grains at 1-30 P.M. Effect *nil.*

Experiment No. 144, Amballa charas, mashak, No. 2.

Male cat, weight 5 lb 5½ oz. Dose 3·74 grains at 11-40 A.M. 1-10 P.M., rocking of body; on walking characteristic gait. 2 P.M., is very considerably affected; on walking tends to fall upon in side. 4 P.M., still under the influence of the drug.

Experiment No. 145, Delhi District charas, dust.

Male cat, weight 3 lb 8 oz. Dose 2·45 grains at 11-50 A.M. 2-30 P.M., asleep; when disturbed displays rocking of the body and the characteristic gait. 4 P.M., still under the influence of the drug, remaining asleep unless disturbed.

Experiment No. 146, Gwalior charas.

Male cat, weight 4 lb 8½ oz. Dose 3·17 grains at 12-30 P.M. Effect *nil.*

Experiment No. 147, Kumaon charas (wild).

Female cat, weight 3 lb 5 oz. Dose 2·31 grains at 12-25 P.M. 1-35 P.M., animal is sleepy; from time to time suffers from rocking of the body. 2 P.M., rocking of the body continues. 4 P.M., still slightly affected by the drug.

Experiment No. 148, Kumaon charas (cultivated).

Male cat, weight 4 lb 9½ oz. Dose 3·21 grains at 1-5 P.M. Effect *nil.*

Experiment No. 149, Nepal charas, A.

Female cat, weight 3 lb 3 oz. Dose 2·33 grains at 1-10 P.M. Effect *nil.*

Experiment No. 150, Nepal charas, B.

Female cat, weight 4 lb 9½ oz. Dose 3·21 grains at 1-35 P.M. Effect *nil.*

Experiment No. 151, Nepal charas, Shahjahani.

Female cat, weight 2 lb 15 oz. Dose 2·05 grains at 1-55 P.M. Very slight effect indeed produced.

(*m*) Seven experiments with a dose equivalent to $\frac{1}{5,000}$ part of the body weight.

Experiment No. 152, Bhagalpur bhang.

Female cat, weight 3 lb 2½ oz. Dose 4·4 grains at 12-45 P.M. 2-40 P.M., rocking of body and some tendency to sleep; walks well. 4 P.M., still displays effect of drug.

Experiment No. 153, Assam bhang.

Male cat, weight 3 lb 5 oz. Dose 4·63 grains at 1-30 P.M. 2-30 P.M., great difficulty in walking; staggering, unsteady gait; marked rocking of body. 3 P.M., asleep with its nose on the ground. 4 P.M., torpid and very definitely under the influence of the drug; characteristic gait.

Experiment No. 154, Gwalior charas.

Male cat, weight 4 lb 2½ oz.; Dose 5·81 grains at 1-40 P.M. 2-15 P.M., rocking of body and staggering, unsteady gait. 3 P.M., very definite symptoms displayed. 4 P.M., still under the influence of the drug.

Experiment No. 155, Kumaon charas (cultivated).

Male cat, weight 4 lb 7½ oz. Dose 6·25 grains at 2-15 P.M. 3 P.M., no apparent effect. 4 P.M., animal is excited and constantly on the move; no tendency to sleep; on running or walking it frequently falls on its side especially on turning round.

Experiment No. 156, Nepal charas, A.

Female cat, weight 3 lb 6 oz. Dose 4·72 grains at 2-20 P.M. Effect *nil.*

Experiment No. 157, Nepal charas, B.

Female cat, weight 4 lb 6½ oz. Dose 5·16 grains at 2-40 P.M. Effect *nil.*

Experiment No. 158, Nepal charas, Shahjahani.

Male cat, weight 5 lb 2½ oz. Dose 7·21 grains at 12 noon. Effect *nil.*

(*n*) Three experiments with a dose equivalent to $\frac{1}{2,500}$ part of the body weight.

Experiment No. 159, Nepal charas, A.

Female cat, weight 3 lb 2 oz. Dose 8·75 grains at 12-45 P.M. Effect *nil.*

Experiment No. 160, Nepal charas, B.

Male cat, weight 3 lb 3¼ oz. Dose 8·96 grains at 1-35 P.M. Effect *nil.*

Experiment No. 161, Nepal charas, Shahjahani.

Male cat, weight 4 lb 4½ oz. Dose 10·76 grains at 1-30 P.M. Effect *nil.*

CONCLUDING REMARKS.

The method of testing samples of hemp drugs by ascertaining their physiological value may be regarded as much more satisfactory in the case of ganja and bhang than in the case of charas. For it is submitted that ganja and bhang do not lend themselves so readily to successful adulteration as charas. Consequently, while the results of the physiological tests may be assumed to have a definite comparative value in the case of the various samples of ganja and bhang, no such reliable result can be claimed from the experiments with the samples of charas.

There are three samples of charas of which the physiological value has not been determined, *i.e.*, the three samples of Nepal charas. For when a dose of more than ten grains administered to a cat weighing less than 4½ lb produced no effects, it did not appear worth while to pursue the investigation further. Whether, however, these three samples are without physiological value due to successful adulteration, or to the absence of active principle in the ganja from which they were prepared, I am not in a position to say. To a varying degree the same remark applies to all those samples of charas in which the physiological value of the extract is much below that of the extract of the standard ganja. Alcohol is able to extract all the active principles present in any sample of hemp drugs. It will be seen on reference to table No. 1 that the quantity of the alcoholic extract varies greatly, and that it bears no relation to the physiological activity of the sample. As already stated this may be due in the case of charas to successful adulteration, but this is by no means to the same extent true in the case of ganja and bhang.

In order, therefore, to obtain a true conception of the comparative value of any number of samples of ganja and bhang, they should be grouped, not according to the quantity of the alcoholic extract, nor yet according to the dose required to produce minimal effects, but according to the quantity of their alcoholic extracts which may be regarded as physiologically active. This has been roughly calculated and the results are given in table No. III. The samples of bhang yield a smaller percentage quantity of alcoholic extract than the samples of ganja. Their alcoholic extract is, in the majority of instances, much less active physiologically than the extracts of the samples of ganja. A point of considerable importance appears to be the great difference in physiological activity presented by the different samples of bhang. The doses of the bhang extracts range from $\frac{1}{5,000}$ to $\frac{1}{100,000}$ part of the body weight, a very much wider range than is presented by the ganja extracts.

The bhang obtained from cultivated plants is at least four times as active as that obtained from wild plants.

The Assam bhang from wild plants possesses equal activity with the sample of Bhagalpur bhang obtained from the Board of Revenue and utilised as a standard.

I would suggest that the other samples of bhang examined, *i.e.*, Khandesh, Amballa, Sholapur, and Satara bhang were obtained either from cultivated plants or contained an accidental admixture of ganja. This would serve to account for their possessing greater physiological activity than the standard bhang.

In conclusion, I have nothing to add to the foregoing remarks except that the experiments recorded, together with the necessary observations, occupied the greater part of each day during two months, apart altogether from the preparation of the alcoholic extracts half of which were prepared by Babu Ram Chandra Datta, 1st Assistant to the Chemical Examiner to Government.

I have the honour to acknowledge the receipt of a copy of Mr. Hooper's report giving the results of his chemical analysis.

I have, &c.,

J. F. EVANS, M.B., *Surgeon-Captain*,

Chemical Examiner to Government of Bengal.

REPORT BY DR. GEORGE WATT, M.B., C.M., C.I.E., &c., REPORTER ON ECONOMIC PRODUCTS TO THE GOVERNMENT OF INDIA.

In reply to your letter No. $\frac{1969}{131}$, dated 23rd April, and your unofficial reminder to hand, I have the honour to say that I had not intended to contribute anything towards the present enquiry into the subject of Indian hemp, because I have little to add that would likely be of any great value further than what is contained in my previous publications on that subject. Indeed, what I might be induced to say as to the botany of *Cannabis sativa* might fairly well be characterised as pure speculation, since I have had no opportunity of personally confirming the impressions obtained from casual observation. Since, however, it seems to be the wish of the Government that I should offer some remarks, I may point out that while the forms of the plant met with in India are botanically only states of *Cannabis sativa*, I believe that, as with all other cultivated plants, there are recognisable races of that species. It would indeed be contrary to experience in other fields of study were it otherwise. The external differences between these forms are however very slight and such as the botanist is by universal usage permitted to disregard. In the herbarium they are indeed hardly distinguishable, though, from the cultivator's point of view, these slight differences may be indicative of widely dissimilar properties. Few botanists would venture to isolate *aus*, *aman*, *boro*, and *rowa* races of *Oryza sativa*; yet the rice cultivator of Bengal would have no difficulty in distinguishing these and many others; nor in fixing the period at which each should be sown and the nature of the soil on which its cultivation would be most successful. This, in my opinion, is an exactly parallel case, and I might mention many such to the wonderful problem of the production of so widely different products as bhang, ganja, charas, and hemp fibre from botanically one and the same plant. Some of the racial characteristics that exist may be mainly due to climate and soil; but it should not be forgotten that there are generally very potent influences in the production of races of cultivated plants. It would accordingly be most unwise to set on one side the possibility of differences, on the ground of these being mainly, or even exclusively, due to climatic and other such influences.

I hold, therefore, that the study of the living plants on the part of a botanist might very possibly result in the isolation of the fibre-yielding plant of *Cannabis sativa* as possessing certain structural peculiarities more or less constantly associated with that physiological property, just as I believe that a similar isolation might be possible in the bhang, ganja, and charas-yielding states of the plant.

2. The practical bearings of this purely botanical contention might be very extensive and valuable. So far as I am aware, no botanist has as yet explained the formation of the narcotic in certain forms of *Cannabis*, and not (or practically not) in others. We may, in fact, be said to be ignorant of the precise use of that substance in the economy of the plant. Its discharge from the stems, leaves, flowers, and fruits seems to a large extent mechanical and to be dependent on some external disturbance, more especially an interruption to the sexual functions of the individual. It may indeed be said to be uncertain whether the formation of the narcotic should be regarded as an excretary substance normally deposited within receptacles, or be viewed, in its early stage at least, as a substance intimately connected with the metabolism of the plant, but which becomes a useless bye-product of life under certain conditions. But of course such excreta are only useless to plant life, in so far that they are not concerned in the further nutritive processes which accompany growth. This is important in its bearing on the probable chemical history of the narcotic. The solid and liquid contents of the laticiferous vessels, for example, of the poppy or of the India rubber plant are very different from the deposits found within glands. The former bear a distinct analogy to the blood in the veins of animals, while the latter might not inaptly be characterised as refuse matter. The contents of the laticiferous vessels may, however, be said to be of two chief kinds—(*a*) those which are constantly being used up in the growth of tissues, such as the proteids, carbo-hydrates, fats, and ferments; and (*b*) the secretions and excretions ultimately thrown down within these vessels or their vesicular modifications, such as the resins, gums, alkaloids, etc. Through the action of ferments many of the latter subsequently become available for the future growth of the plant, so that they are more properly stores of food than excreta. But the purely excretary matter stored up by plants in their variously formed receptacles may be here mentioned, such as granules of calcium oxulate; resins and ethereal oils combined usually into balsam, mucus, various kinds of gums; and lastly tannins (some tannins are, however, reserve-materials). These and such like are the excretary deposits, and they are made normally within individual cells dispersed through the tissue or into cells arranged in rows forming vesicles between the vascular bundles. Sometimes also the receptacles of secretion are intercellular spaces of various shapes and sizes filled by the discharges from the abutting cells A well-marked modification of this might be mentioned in the resin and gum passages which are formed by the separation of

rows of cells, thus producing intercellular chambers of considerable length. A point of importance that may be here specially mentioned is the fact that excretary deposits of the nature here discussed are made from the very earliest period of individual life; in other words, anterior to the formation of even vascular tissue and consequently long before the stage at which flowers and fruits are formed.

But there are further purely epidermal receptacles of secretion quite distinct from those discussed above. To this class belongs, according to the commonly accepted views, the deposits of the narcotic in the hemp plant. Epidermal receptacles are generally designated as glands, but in the vast majority of cases these contain only ethereal oils with resins dissolved in them. And there are two classes of glands—those located just below the epidermis and those above it; the latter are mostly hairs or stings. The viscid condition of the surface of many leaves is due to epidermal glands, and in some cases the fluid contents of such glands possess a characteristic odour peculiar to the species. The formation of glands and the nature of their contents are essentially different from the corresponding features detailed above regarding the laticiferous system and its excretary deposits, and this distinction is of vital importance. Glands originate from a single mother-cell which undergoes division until a rounded mass of tissue is produced, the cells of which are smaller than those of the closely-fitting surrounding tissue, and they contain a peculiar form of protoplasm. Later on the central cells of this special structure become absorbed, thus forming a cavity which contains the solution of the cells and their contents, the secretionary product of glands. It is thus doubtful how far the contents of glands can be called excretary deposits. They are more frequently specific secretions formed for a definite purpose in the life history of the plant. Such, while discussing the glands of the hop, "says the so-called Hashish arises similarly in the long-stalked many-celled capitate hairs of the female plant of the Indian hemp." But I suspect that in the plant as met with in India there is something more than this, and that microscopical investigations are likely to reveal special developments by which the resinous narcotic has assumed the character of an excretary discharge. At all events the formation of the narcotic is not, so far as my observation goes, confined to the female plant. But I have already qualified my opinions as those based on casual observation, and I need therefore only add that the above review of the most recently published theory of the deposition, permanently or temporarily, of various chemical substances within the tissues of plants has been given with the object of showing the possibility of there existing in *Cannabis* some structural modifications by which the narcotic is deposited *within* the leaves of one form (the bhang-yielding plant); appears on the *surface* of the female flowering-tops (especially if fecundation be prevented) of another, the ganja plant; and exudes from the *surface* of the leaves, stems and fruits of still a third—the charas plant. And I would even venture to go further and suggest that when the chemistry of the substance is fully worked out it will be found to vary quite as greatly in these three forms of *Cannabis sativa* as does the inspissated laticiferous fluid (opium) of the various cultivated races of *Papaver somniferum*. Such variation might account for the reputed different properties of bhang, ganja and charas. In concluding this section of my remarks, therefore, I would only add, by way of recapitulation, that if the narcotic of Indian hemp (as currently believed) be purely and simply a glandular secretion, it differs as widely from opium botanically as it does chemically. It must in that case be a substance unconnected with the metabolism of the growing plant, and its reputed formation in association with imperfect fecundity might be characterised as very possibly a pure hallucination of ignorant cultivators.

3. Accepting the main contention here advanced that, as in the case of all other Indian crops, so with *Cannabis sativa*, there are cultivated races, we obtain at once a solution of the remarkable fact of one and the same plant botanically yielding in one part of India one product, in another a widely different article. We are enabled also to understand why it should alike luxuriate on the tropical plains and on the Alpine slopes. But this view of the case urges, as of primary importance, that early attention be given to the systematic study of the various forms, so that we may be saved from the error of arousing false expectations or of doing injury to one cultivator because, perchance, of the pernicious nature of the product of another's labours. When Dr. Stocks wrote in 1848 that "the plant grows well in Sind, and if it ever should be found advantageous (politically or financially) to grow hemp for its fibre, then Sind would be a very proper climate," he was reasoning very possibly from insufficient data. Because *Cannabis sativa* (in one of its charas-yielding states), flourishes in Sind, it by no means follows that accordingly the fibre-yielding plant may be substituted. On the contrary, we now know that by far the major portion of the narcotic-yielding races of the plant form no marketable fibre in their stems, and further that it is but rarely the case that both series of races (narcotic and fibre) can be grown in the same locality. So far as works published in Europe are concerned, it may in all fairness be said that the error has been very frequently made of regarding the Garhwal and Kumaon regions of fibre production as the total areas of Indian hemp cultivation in this country (*e.g.*, *Cyclopædia of India* and the *Encyclopædia Britannica*), or on the other hand of mistaking the extensive areas of narcotic production as possible regions of the supply of a fibre which is sometimes spoken of as at present being allowed to run to waste. Errors of this nature would, as I take it, be quite as serious, if not more so, than the omission to demarcate the tracts of country over which each

peculiar form of the narcotic-yielding plant is found. Without therefore entering on the subject of the deleterious nature or otherwise of the drug, I may safely say that, in my opinion, it would be undesirable to impose restrictions of equal severity on tracts of country where fibre is produced or where bhang only can be grown, as on regions of ganja or charas production. It would be quite as justifiable to prosecute occupants of houses where the wild plant occurred within a fixed radius. Legislature might rather proceed on the lines of the scientific limitations of the forms of the plants possible of cultivation and the character of the narcotic produced.

4. Before concluding I may add that, in spite of all that has been written to the contrary, I still believe that India may one day come forward as a valued country in the production of hemp fibre. With the gradual extension of railway communications the valleys of the Himalaya will sooner or later be tapped, when hemp production may then be expected to assume considerable importance. But there are very possibly tracts of the central table-land of India similar to the Godavery district (where hemp fibre is a regular article of trade) which could easily grow the fibre-yielding forms of the plant and thus give to India a new source of wealth. It is therefore, in my opinion, a matter of considerable moment that this feature of *Cannabis sativa* cultivation should not be lost sight of amid the conflicting mass of opinion likely to be recorded regarding the hemp narcotics.

Note added by Secretary, Revenue and Agricultural Department.

An illustration of Dr. Watt's argument may be suggested by the case of the flax plant *Linum usitatissimum*, which supplies fibre in Ireland and Europe and only oil-seeds in India. Attempts to grow flax for fibre in India have failed, and attempts to grow it for oil-seeds in Europe would probably fail also.

If for any reason flax (fibre) were condemned as an injurious article, it would be very hard to prevent the natives of India from cultivating it for oil-seeds. Or if the oil-seeds were condemned as an intoxicating food for cattle, would the growing of flax for textile purposes be forbidden in Europe ?

Letter from BRIGADE-SURGEON-LIEUTENANT-COLONEL GEORGE KING, M.B., LL.D., F.R.S., C.I.E., Superintendent, Royal Botanic Garden, dated 18th June 1894, to the Secretary, Indian Hemp Drugs Commission.

I have the honor to acknowledge the receipt of your letter No. 455 forwarding, for the expression of my opinion on some of the matters touched on therein, a copy of a letter addressed to you by Dr. G. Watt, No. 422, dated 31st ultimo.

2. In the first paragraph of his letter Dr. Watt reminds the Commission that, as in the case of other cultivated plants, so in that of *Cannabis sativa*, there are races. The most notable of these races in *Cannabis* of course are the *fibre-yielding race*, found in Europe and in temperate parts of the Himalayas; and the *narcotic-yielding race*, found in the plains of India and other tropical parts of Asia. In addition to these well-marked races, I understand Dr. Watt to say that he believes that, by a prolonged and careful study of living plants of *Cannabis*, intermediate races might become recognisable.

3. In the second paragraph of his letter Dr. Watt expounds the methods and objects of the formation, within the tissues of living plants, of the substances which may be classified as (a) *reserve materials*, i.e., matters prepared by plants with the object of being consumed in the processes of growth. (Of this kind of product starch may be taken as a familiar example.) (b) *Excretions*, i.e., substances built up by the plant as bye-products, and containing matters which are really as much rejections from the food-stuffs of plants as are the matters rejected by animals at the conclusion of the process of digestion. These excreta of plants are not however actually voided, as is the case in animals; but are deposited in glands in various parts of the tissues. Familiar examples of these are gums, resins, and many of the vegetable alkaloids. Dr. Watt's own opinion as to whether the narcotic matter of *Cannabis sativa* is of the nature of a reserve-material, or an excretion, is contained in the last two sentences of the second paragraph of his letter. I may observe that, in the first chapter of his report on ganja, Dr. Prain gives his opinion in favour of its being of the nature of a reserve-material.

4. The third paragraph of Dr. Watt's letter is occupied with the consideration of the possibility of growing hemp for its fibre profitably in India, and presumably for export; while, in his fourth and final paragraph, Dr. Watt expresses his belief that "India may one day come forward as a valued country in the production of hemp fibre." The Commission are of course aware that, early in the century, the Hon'ble East India Company made an effort to grow hemp fibre profitably in this country in the way that still appears to afford the greatest probability of success, *viz.*, by sowing seeds of the European fibre-yielding race. The company's experiments, which extended over several years, were ultimately abandoned, the evidence of the hopelessness of the scheme having been accepted as conclusive. Equally unsuccessful were later experiments made with the view of obtaining a useful fibre from the narcotic-yielding race ordinarily cultivated in India. Dr. Watt's present hope appears to be founded on the alleged existence of a tract of country on the Godavery "where hemp

fibre is a regular article of trade," and on his expectation that there may "possibly" be "tracts of the central tableland of India similar to the Godavery district which could easily grow the fibre-yielding forms of the plant." As regards the growth of hemp fibre in the Godavery district, there should be no difficulty in finding out what the real fact is, *i.e.*, whether the "hemp" grown there is "sunn hemp," the product of a plant of the pea family named *Crotalaria juncea* or ganja hemp. If the latter, then it might be worth while to repeat, on a small scale, the Honourable Company's experiment of growing from European seed.

5. The inner valleys of the Himalayas appear to me to be so handicapped by the heavy cost of carriage of their produce to a seaport as to make it unlikely that hemp fibre grown in them could compete successfully in the London market with fibre grown on the continent of Europe. Moreover, when one considers the number of fibre-yielding plants which are known to be indigenous to India, one rather doubts the expediency of selecting for encouragement the cultivation of a species of which even the fibre-yielding race yields a narcotic so potent as charas.

6. I regret that I am unable to explain the precise meaning of Dr. Watt in the sentence alluded to by you and which ends as follows: "tracts of country where fibre is produced, or where bhang only can be grown as in regions of ganja or charas production." From the context, I gather that Dr. Watt suggests that excise regulations should be relaxed in regions where the *Cannabis* plant produces fibre, even although it may also (as it in fact does) produce charas.

MEMO. BY BRIGADE-SURGEON-LIEUTENANT-COLONEL G. KING, M.B., LL.D., F.R.S., C.I.E., DIRECTOR OF BOTANICAL SURVEY OF INDIA.

1. The plant familiarly known as Indian hemp (*Cannabis sativa*, L.) is really wild in no part of British India. But in all parts of India, and also in Upper Burma, plants of it may be found growing without cultivation near villages and gardens where hemp is at present, or has in former times been cultivated. In botanical phraseology, hemp is found in India, not as an indigenous plant, but as an escape from cultivation.

2. By physical conditions, I understand soil and climate. As regards soil, the drug-yielding variety is (as I am informed by Dr. Prain) grown on a large scale, and as a regular crop, only in Rajshahye, in some parts of the tributary mehals of Orissa, and in some parts of Central India. The soils of the tracts where it is so grown have not, so far as I am aware, been analysed chemically; physically they are known to be friable and well drained. Soil, however, does not appear to be a matter of much importance in the growth of the resin-yielding hemp. For, with careful cultivation, it can, I understand, be grown as a garden crop in any part of India. At elevations below 2,000 feet, the difficulty of cultivation is very slight; from 2,000 to probably 9,000 feet there is no difficulty whatever. At higher elevations than the latter it does not appear to be much grown. As regards climate there is little to be said beyond that a period of continuous dry weather, extending over three or four months of the year, is essential, and that temperatures like those prevailing in the middle zone of elevation in the North-Western Himalaya appear to be the most favourable for the development of the drug.

REPORTS BY MR. B. C. BASU, ASSISTANT TO THE DIRECTOR OF THE DEPARTMENT OF LAND RECORDS AND AGRICULTURE, BENGAL, ON THE SPONTANEOUS GROWTH OF THE WILD HEMP PLANT IN THE DISTRICTS OF BHAGALPUR AND PURNEA.

With reference to your letter No. 333, dated 29th ultimo, I have the honour, in the absence of Mr. W. C. Macpherson, Officiating Director of Land Records and Agriculture, on tour, to submit the following report on the spontaneous growth of the wild hemp plant in the districts of Bhagalpur and Purnea. The statements contained in this report are based on my personal observations and enquiries conducted in different parts of these districts. For this purpose I visited a large number of villages in Purnea and north Bhagalpur. I was informed by the Excise Deputy Collector of Bhagalpur and other gentlemen whom I had the opportunity of consulting on the subject that the bhang plant grows rarely on the hard reddish soil of the South Gangetic division of the Bhagalpur district, and for this reason, and also on account of the extremely short time within which I was required to submit my report, I was obliged to leave this tract of country out of the scope of my enquiries.

2. The prevailing soil of north Bhagalpur and of Purnea is of a more or less sandy character and of a light grey colour; loamy soils are occasionally found in the low rice lands, and clay soils are practically unknown. The different parts of these districts suffer unequally from floods. Some tracts enjoy complete immunity from floods; some are inundated only during short periods when the rivers rise very high, and even then a considerable area of each village remains above water, while in others the villages are completely inundated by water on all sides during the entire rainy season, the houses alone with little bits of elevated land adjoining thereto remaining above water. I tried to extend my enquiries to every typical tract of country in north Bhagalpur and Purnea, and I trust that what I have said below with regard to the spontaneous growth of the bhang plant will apply equally to the whole of these districts.

3. There appears to be some confusion about the right use of the terms "alluvial lands," "dearah" and "chur lands." "Alluvial land" is a very general term which applies equally to all lands that have been formed by the silting action of water. In fact, it includes almost the whole of Bengal proper and Bihar. By "dearah" or "chur" (which terms are synonymous) is meant land that is still in course of formation by fresh deposits of silt from a river which actually flows over it during the rains. It is unlike land which is inundated with the spill water of a river carrying with it little or no silt, and thus derives little addition or benefit from the inundation. In course of time, *dearah* lands may be sufficiently raised to get beyond the reach of ordinary floods; villages are settled on them, and gradually they lose their destructive character and merge into old alluvial lands.

4. The points on which the Commission have desired for information are:

(1) The circumstances under which the hemp plant grows wild in those districts?

(2) If it grows on land that is submerged, for how long a period is such land submerged?

5. To the second question I may reply at once that the plant will never grow in land that remains submerged under water during the rains. The floods of the Kosi come with sudden violence, so that it occasionally happens that the waters have reached the *anginas* or quadrangles of the houses, and people have to wade through water in moving from one house to another. But this state of things ordinarily lasts for a day or two, and seldom for so long a period as seven days. The same is true of the floods of the Ganges, though they do not occur or subside with such suddenness as those of the Kosi. Bhang may grow on lands which undergo such short submersions, but I am satisfied that it will never grow on land that remains longer under water. The plant is essentially a weed of high and dry land.

6. I am not surprised that the evidence laid before the Commission was discrepant as to the question whether wild hemp grows on submerged lands or on the higher lands above the reach of floods. Very few of the villagers whom I questioned seemed to have any definite idea on the subject, some averring that hemp seed remaining in the soil retains its vitality for an indefinite time even when submerged under water, and that it sprouts as soon as the soil has become sufficiently dry after the subsidence of the flood, while others allege that the seed is bound to lose its germinating power under prolonged submersion. The following facts which I observed would, however, appear to lend support to what I have said above:—

First.—The class of land on which the hemp plant grows in Purnea and Bhagalpur, as will appear later on, precludes entirely the possibility of long submersion under water.

Secondly.—The plant is very often found to grow on the upper edges of deep ditches and other hollows which remain more or less full of water during the rains, but in no single instance could I discover a hemp plant growing on their bottoms and slopes which were nevertheless crowded with numerous weeds characteristic of a water-logged soil.

The fact that the bhang plant grows in the greatest profusion and with the greatest luxuriance in those villages which suffer most from floods has doubtless given rise to the impression that it grows on land that remains under water for a long time.

7. The range of the plant being confined to the higher lands of villages above the ordinary flood level, it must not be imagined that it grows on every description of such lands. In fact the conditions under which it grows appear to me to be extremely simple. As a rule, it is confined to land in the immediate vicinity of the raiyats' homesteads. Such land is usually called *dihisar* in Purnea and Bhagalpur, and is naturally the richest in the village. It receives the dropping of the raiyats' cattle, which are kept tethered on it, as well as all kinds of house refuse and sweepings. It is almost invariably cropped with mustard and tobacco crops, which never flourish except on rich soil. In those villages, however, which suffer most from floods, the extent of such land is limited, and what little there is of it is seldom cultivated, but is used as standing room for the raiyats' cattle during the rains, and is left bare during the rest of the year. It would thus appear that a rich soil is essentially necessary for the growth of the hemp plant, and such soil is never found at a distance from the village site; the plant is practically confined to the immediate neighbourhood of the raiyats' homesteads.

8. I have said that wild hemp is generally associated with tobacco and mustard. The cultivation of these crops seems to afford conditions which are eminently favourable to the growth of bhang, and which are not afforded by the cultivation of any other crops grown in those districts. In the first place, the soils on which tobacco and mustard are grown are rich in manure, while the outlying fields, which grow different kinds of *bhadoi* and *rabi* crops (*e.g.*, paddy, marua, indigo, rahar, etc., during the rains and *kurthi*, barley, gram, lentils, etc., during the cold weather), are never manured. In the second place, *dihisar* lands which bear tobacco or mustard are left without tillage till May or June, by which time the hemp plants have dried up and shed their seeds; these lands are invariably kept fallow during the rains for the benefit of the succeeding tobacco or mustard crop, and the raiyats being too busy with the cultivation and sowing of indigo, *bhadoi*, paddy and other rain crops, have no time to attend to the tillage of the *dihisar* lands until May or June. The outlying fields are, however, broken up after the first shower in Magh (January-February), and the hemp plant, even if it could once find a footing on such lands, would be eradicated before it had a chance of shedding its seeds. I have also noticed that the hemp plant grows at its best in the higher parts of sloping fields. On deserted house sites, a most favourable resort of this weed, it grows more luxuriantly over the top of the mounds than on the sides, and better over the sides than at the bottom. These facts would show that the plant affects well-drained soil and cannot bear a soil which remains over-charged with water for a long time. This may also account for the absence of bhang from outlying fields from which water does not flow off so readily as from homestead lands.

9. I found bhang growing most luxuriantly in those villages which are reduced to the state of little islands during the rainy season. These villages contain large areas of waste land which afford pasturage to enormous herds of buffaloes and cows during the cold and hot weather; and cattle-breeding is a regular profession with the villagers. The *dihisar* lands are used as *bathan*, or standing ground for the cattle, and thus get abundantly manured with cattle dung. The washings from these lands flow over the alleys and ditches in the village, and as there is little or no cultivation at any time of the year, every bit of bare ground, which is otherwise suited, is covered with a luxuriant mass of wild hemp as soon as the cold weather has set in.

10. The soil on which the bhang plant grows in Purnea and North Bhagalpur is invariably of a sandy character; in fact, as I have said before, there is little else but sandy soil in these districts in particular on the higher lands which form the village site. The hemp plant is known to require a loose sandy soil and a moist climate, both of which conditions are offered by the district of Purnea and the northern half of the Bhagalpur District. I cannot also help believing that the negligent character of the prevalent system of cultivation encourages the growth and spread of bhang. Thus I found that although tobacco is very largely grown in Purnea, very little care is bestowed on keeping the crop free from weeds. The young seedlings are transplanted early in Kartik, and after two or three weeks, that is, about the end of Kartik, the soil is lightly stirred up with a hoe, and bhang and all other weeds are removed. Beyond this single cleaning, few cultivators would attempt to check the fresh growth of weeds. A fresh crop of bhang comes up in a short time and overspreads the field. It is in fact said that bhang comes up anew after each weeding during the cold weather, the roots throw up fresh shoots, and there are always some seeds in the soil ready for germination at any time during the cold weather as soon as circumstances permit. In North Bengal and in parts of Central Bengal, where tobacco forms a staple crop, the raiyat would never allow a single weed to appear in his tobacco field until the crop is actually reaped, and however favourable the conditions of soil and climate may be, it is certain that the bhang plant can never obtain a footing on land so carefully cultivated.

11. I have so far dealt with the circumstances under which the wild hemp plant grows spontaneously in Purnea and Bhagalpur. It is clear that the plant is never found on land that remains long under water, that it is as a rule found on homestead lands, such as are either cropped with mustard and tobacco, or are used as *bathan* for cattle.

12. There can be no doubt that Government is now foregoing what may prove to be an important source of excise revenue owing to the free use of bhang in those districts where the hemp plant grows in a state of nature, and, what is more serious is that no attempt is made to check the use of this noxious drug. The working man often stands in need of ganja, but bhang is the beverage of the comparatively well-to-do and lazy classes, and it is only reasonable that they should be called on to pay their share of taxation instead of altogether escaping from it, as is the case at present in many of the districts of North Behar. I have considered the possibility of exterminating the wild bhang plant, and if this can be done, as I believe it can, bhang may be grown under the same restrictions as ganja is at present cultivated in Rajshahi. I have said that the plant grows very seldom at a distance from the raiyats' houses, so that if the responsibility for eradicating the plant is thrown upon the immediate occupier of lands, I have little doubt that the weed can be exterminated in the course of a few years. If the plant grow like many other weeds in all circumstances of soil and situations, its extermination would be a work of great difficulty; but, confined as it is to lands immediately adjoining the raiyats' homesteads, its eradication need not entail undue hardship on the cultivators. The plant comes up in November and occupies the soil till May, and although each weeding causes fresh plants to come up, yet two or three weedings given in succession cannot fail to free the land for the year from this noxious weed. The point to be insisted upon is that the plants should never be allowed to flower and seed. The seeds of the plant are easily carried from place to place; they are easily transported by wind and water, and cattle and goats, which occasionally browse on bhang, may drop seeds with their excrements in fields that may be previously free from the pest. The total extermination of the plant may therefore require several years of determined and continued effort. Efforts have been made from time to time to exterminate wild hemp in several police circles through the agency of village chowkidars, but they were of an extremely desultory character and consequently failed to produce the desired effect. In case it be decided to have the plant exterminated, I may suggest that an experiment may be made in a small isolated tract of country for two or three years in order to see if the plant can be wholly destroyed by a continued course of eradication.

In continuation of my letter No. 1258-A., dated the 18th instant, I have the honour to submit, for the information of the Commission, the following facts which came to my notice in the course of my enquiries with regard to the spontaneous growth of the wild hemp plant in Purnea and North Bhagalpur.

2. I could find no evidence of the hemp plant being actually cultivated in any part of Purnea and Bhagalpur: everywhere it came up as a weed. In some places, however, where the plant did not grow in abundance and would, therefore, seem to be an object of considerable value to bhang drinkers, I observed signs of its having been looked after with some degree of care. As a rule, the people of these districts could not distinguish between male and female plants, the leaves of both being used as bhang, but one man pointed out to me a plant which was a female and said that this class of plants produced the best drug. It is not uncommon to see a few selected plants, mostly females, left on the ground; these acquire a nice bushy appearance, not unlike that of the ganja-bearing plant. All this made me suspect that the people knew a great deal more about the bhang plant than they were willing to avow.

3. I was told by several persons, among them a European gentleman who has long resided in North Bhagalpur, that bhang is often used to adulterate ganja. I am unable to vouch for the accuracy of the statement, but if it be true it will furnish a strong argument in favour of the extermination of the hemp plant from those districts in which it grows spontaneously at present.

4. Besides yielding the intoxicant drug the wild hemp plant is used in Purnea and North Bhagalpur as fuel, and occasionally, though seldom, the green plants are twisted in the absence of other materials at hand into a rough sort of rope for binding bundles of wheat and barley and carrying them from the field to the threshing-floor.

NOTE BY MR. B. ROBERTSON, DEPUTY COMMISSIONER, NIMAR, ON CULTIVATION AND PREPARATION OF GANJA IN NIMAR.

Locality and climate.

Ganja is grown in 60 or 70 villages in Nimar. The cultivation is confined to the western half of the Khandwa Tahsil. The rainfall at Khandwa may be taken as an average for this tract. During the last 25 years this average has been 32·76.

Soil.

2. The soils in which ganja is grown are known locally as—

"Pandhar"—land near the village abadi, which is largely mixed with ashes and sweepings from the village (see Nimar Settlement Report, paragraph 307).

"Mand"—a light yellow alluvium previous to moisture (see for description, Nimar Settlement Report, paragraphs 13 and 306).

"Kali"—black soil.

The first two are the best. In very wet seasons, the third kind retains too much moisture near the surface.

Seed.

3. Seed is raised in the villages of Karki, Punjhria, and Chhirbel in this district. But the best seed comes from Dhakalgaon in Holkar's territory. The latter gives a stouter and more branching plant than the local seed. Both seeds are used all over the ganja-growing tract, but Dhakalgaon ganja is more specially produced towards Dhangaon in the north. The price of ordinary seed is 8 annas a ser and of Dhakalgaon, Re. 1. The production of the latter is limited, and it is much sought after and is therefore high-priced.

Ploughing and manuring.

4. The land is plentifully manured about every third year. There is no rotation of crops, ganja being grown in the same fields year after year. The manuring takes place in April or May. The manure is spread on the surface, and mixed with the soil by "bakharing." There are in all two ploughings and two "bakharings" before the soil is ready for the seed.

Sowing.

5. Sowing takes place about 15 days after the rains have broken. The seed is sown by means of a hollow bamboo used along with a "bakhar." There is no transplantation in Nimar. The seed germinates in three or four days after sowing.

Weeding.

6. Weeding is commenced about 20 days after sowing. A hoe (kolpa) drawn by a pair of bullocks is passed along the furrows to clean the space between the rows of plants. Ordinarily this bullock "hoeing" takes place twice. The spaces between the plants are cleaned by means of a "khurpi," or small hand-hoe. About the same time, the lower leaves of the plants are broken off, leaving the lower part of the stem bare. The whole of this weeding and cleaning process goes on for about a month.

Eradication of male and useless plants.

7. Next takes place the eradication of the male and certain other useless plants. The word used is "párakh," meaning examination. The first plant eradicated is the male, known as "naria" or "bhangra." Then comes another plant called "adnaria," a hermaphrodite showing signs of both sexes. Other plants are known as "seoria" and "moria," both of which are generally uprooted. The "moria" is, until 15 days or so before cutting, undistinguishable from the female plant. The flower of the female plant never opens, while the "moria" flower at this time assumes a yellowish or reddish tinge and opens out. A certain amount of ganja can be obtained from the "moria" plant, and it is sometimes allowed to stay on in a crop of "mal" or good ganja. It possesses the faculty of fertilising itself, for it produces a seed, the result of sowing which is a crop of nothing but "moria" plants. It is needless to state that it is ruthlessly weeded out of ganja which is being grown for seed.

The "párakh" process begins about a month after sowing. About this time both the male and female plants begin to flower. All the cultivators possess the faculty of recognising the noxious and useless plants, and no special class is employed for the purpose. The male and "adnaria" plants first manifest themselves. "Moria" plants, as has been noted, are not distinguishable until shortly before the crop is ripe.

Watering.

8. In September, three months after sowing, the crop is irrigated. Three waterings are given at intervals of 10 to 14 days.

Harvesting.

9. About the first or second week of November the crop ripens, the flowering heads assuming a brownish appearance. Dhakalgaon ganja ripens 15 days later than local ganja. The twigs which bear the flowering heads are broken off, collected in baskets, and carried to a threshing-floor. There they are spread out, and a heavy roller is passed over them. This is done only the first day as a rule; after that, as the twigs begin to dry, they are pressed under foot for three or four days. By this process the twigs are almost entirely cleaned of their leaves, and only the flowering tops remain, the latter being flattened out. The produce is then known as "kalli." The "kalli" is afterwards taken to the cultivators' houses and there stacked in heaps, which are kept pressed down by a heavy weight. It remains like this for a week, after which it is packed in gunny bags, each containing from 2 to 3 maunds, and taken to the Khandwa storehouse.

Outturn.

10. The average outturn from an acre is from 12 to 15 maunds. The crop has in recent years been bought up by a corner of "dallals" at Khandwa, the ordinary price ranging from Rs. 5 to Rs. 7 per maund, according to quality. The average money outturn per acre is thus about Rs. 80 or Rs. 90, and the money cost of cultivation is estimated at Rs. 60. The selling price per maund at the Khandwa storehouse is at present as high as Rs. 15 or Rs. 16 per maund.

Statement showing extent of ganja cultivation in Nimar during the last 20 years.

Year.	Number of licenses for ganja cultivation.	Area under cultivation.	Remarks.
1	2	3	4
		Acres.	
1873-74	...	976·05	The figures in column 3 represent the area actually cultivated, not the area for which licenses were granted. The latter is almost always in excess, as the cultivator generally asks for a license for more land than he means to plant, in order to ensure against his being proceeded against for excess cultivation.
1874-75	...	535·35	
1875-76	...	414·65	
1876-77	519	656·20	
1877-78	745	1,009·65	
1878-79	701	828·	
1879-80	...	252·35	
1880-81	...	437·10	
1881-82	...	78·15	
1882-83	485	359·	
1883-84	572	743·10	
1884-85	1,207	838·	
1885-86	1,757	1,106·	
1886-87	484	830·	
1887-88	433	485·	
1888-89	574	833·	
1889-90	699	916·	
1890-91	408	477·91	
1891-92	474	963·05	
1892-93	697	984·34	

MEMORANDUM BY MR. H. V. DRAKE-BROCKMAN, OFFICIATING COMMISSIONER OF EXCISE, CENTRAL PROVINCES, ON THE CULTIVATION AND MANUFACTURE OF GANJA IN THE KHANDWA TAHSIL OF THE NIMAR DISTRICT.

Ganja is sown yearly in about 100 villages, and about 600 or 700 licenses are issued each year. Seed is locally raised in the villages of Lohari, Karki, Panjhria, and Chhirbel; this seed produces a comparatively thin plant which does not branch off so freely as that raised from the seed obtained from Dhakalgaon in Indore. Dhakalgaon seed is sold at a minimum price of Re. 1 per ser; it has, on several occasions, gone as high as Rs. 2 per ser. The ordinary price of local seed is Re. 0-12-0 per ser. Seven or eight villages in the Dhargaon station-house circle use Dhakalgaon seed, and the ganja raised in them commands the best price at the Government storehouse.

2. "Pandhar" (chalky), "mand" (black with an understratum of yellow clay), and "kali" (rich black) are the soils most suitable for ganja rearing. The first two are the best; the last is also good, but in seasons of more than average rainfall retains too much water close to the surface.

3. Irrigation and plentiful manuring being indispensable, the same fields are used year after year. A single manuring produces an effect which endures for two or three years, so that there is no inducement to practise rotation of crops.

4. The land selected is well manured every third year in Baisakh (April to May), 16 to 20 full cart-loads being allowed per acre; the ordinary household refuse, cowdung, and ashes are used, and if the home supply is inadequate, more is purchased at the rate of Re. 1 per cart.

5. If gram or masur is not grown in the field, it is ploughed over once in January or February. In any case the ground is in Baisakh (April to May) turned over with the "hal" ("nagar" or earth-turning plough) to expose it to the sun, and then well "bakhared" to make it smooth and to break up all large clods. If it is the turn of the field to be manured, the manure is spread after the ground has been turned over, and is then worked in with the "bakhar." When the ground has been well soaked, *i.e.*, about 15 days after the setting in of the rains, it is again turned over with the "hal" and levelled with the "bakhar." Seed is sown on a sunny day in the latter half of Asarh (June to July), *i.e.*, 20 to 25 days after the setting in of the rains, an instrument called "sarta," which is worked along with a "bakhar," being used for the purpose.

6. For six days after sowing, a strict watch is kept, otherwise birds would do great damage when the seed germinates, which it does four days after sowing. Twenty days after sowing, *i.e.*, when the plants are about 9 inches high, weeding of grass and thinning of plants begin; an implement called "kolpa" is used for the former purpose. A space of 6 to 9 inches is cleared between each plant and the next, the intervening plants being uprooted and thrown away. About six weeks after sowing, the first examination (párakh) takes place. All the male plants ("naria" or "bhangeru") which can at that stage be recognised as such are picked out and thrown away. The cultivators appear to be able to distinguish the pollen-bearing sacs ("ghungri") of male flowers even at this early stage. This examination is repeated daily for about two months. Then comes a second examination with a view to eliminate those plants which combine the signs of both sexes ("adnaria"). These "adnaria" plants seem to be identical with the "abnormal female plants with some male flowers on them," of which mention is made in Chapters II and VI, Part I of Dr. Prain's Report.

7. There is yet another class of plant which is eliminated; this is called "moria," and is said to be identified from its bearing a cluster of flowers on the top. The "moria" plants are not injurious to others, but are eliminated because they are useless for the purpose of ganja manufacture, their flowering heads being devoid of resin, and consequently of intoxicating power. Sometimes they are allowed to remain in the field; if removal is determined upon the necessary action is taken a fortnight or so before cutting begins. These plants probably correspond with those termed "khasia", in Bengal—see Chapters I (page 2) and II (page 5) of Dr. Prain's Report.

8. During the fourth month, *i.e.*, in October, the plants are irrigated; rainfall will from this time onward injure them by washing away the resinous juice they contain; whereas irrigation increases the amount of this juice. Three waterings are given, an interval of seven days being allowed between each. It will be understood that irrigation is only beneficial if effected after the rains have entirely ceased.

9. About four and a half months after sowing, *i.e.*, generally about the 20th November, the flowering heads assume a brownish appearance, which is a sure sign of maturity. Cutting

then begins. Only the "bhuttas," *i.e.*, twigs about 12 inches in length which bear the flowering heads, are picked; they are collected in baskets and emptied into a "khala" (threshing-floor). At night the whole of the day's cutting is spread out in a layer, 9 to 12 inches thick, and left exposed to the dew till the following morning. The next step is to press the pickings flat; this is done by men treading them under foot. Several heaps are formed, which are worked upon in turn, each being turned over and left to dry in the sun while another is being pressed. This process goes on for four or five days, and the ganja is then taken to covered sheds where it is stacked to a height of 5 or 6 feet, and kept down by heavy weights. After remaining in this state for about a week, it is packed tightly in gunny-bags, and taken to the Government storehouse at Khandwa.

10. Seven days' previous notice of intention to cut the ganja crop has to be given to the Tahsildar, and the whole crop must be removed to the Government storehouse within 30 days of the date on which permission to cut is granted.

11. The following is an estimate of the cost of cultivating an acre of ganja and of manufacturing the crop into the article supplied to wholesale vendors:—

	Rs.	A.	P.
Rent paid to Malguzar	3	0	0
First ploughing, 8 days, at Re. 0-12-0	6	0	0
Cost of carting and spreading manure (every third year)	20	0	0
First bakharing, 4 days, at Re. 0-12-0	3	0	0
Second ploughing, 2 days, at Re. 0-12-0	1	8	0
Second bakharing, 1 day, at Re. 0-12-0	0	12	0
Sowing, 1 day, at Re. 1	1	0	0
2 weedings, 4 days, at Re. 1	4	0	0
5 men with kolpas for 5 days...	5	0	0
4 examinations, 32 men	8	0	0
3 waterings	4	0	0
12 men for reaping	1	8	0
2 basket carriers from field to khala	0	8	0
6 men for 4 days for pressing...	6	0	0
1 cart from khala to sheds	0	8	0
6 gunny-bags	3	12	0
Labour for filling bags	0	12	0
1 cart to Khandwa	1	8	0
Hamalage at Khandwa	0	6	0
Storage in the godown at Khandwa at Re. 0-0-6 per maund per mensem—say	0	12	0
TOTAL ...	71	14	0

It must be understood that the above estimate is drawn up on the assumption that hired labour is employed for all purposes. As a matter of fact, however, the cultivators and their families themselves do almost all the work, and cash payments are limited in practice to the following:—

	Rs.	A.	P.
Rent	3	0	0
Weeding—say	5	0	0
Reaping and carrying	2	0	0
Pressing	6	0	0
Price of bags	3	12	0
Godown charges—say	1	4	0
TOTAL ...	21	0	0

The rates adopted are those prevailing in the immediate vicinity of Khandwa; elsewhere the cost of cultivation would be somewhat less. The average outturn from an acre is *16 maunds*, and the average selling price at the Government storehouse, Rs. 4 per maund.

12 The method employed for the cultivation of the plant for seed is precisely the same as for the production of the ordinary ganja ("mal") as regards preparation of the soil. Male plants ("naria") are of course essential in this case; most, however, are eliminated. "Adnaria" plants are all eliminated, as in a field of "mal" ganja. When the seeds have set, the plants are cut down, tied in bundles and dried in the sun. The seed is then threshed out by hand. Irrigation is not required, and comparatively little attention is paid to the crop.

REPORT BY MR. H. M. LAWRIE, C.S., OFFICIATING DEPUTY COMMISSIONER, BHANDARA, CENTRAL PROVINCES, ON THE CONSUMPTION OF GANJA AMONG THE POWARS.

In accordance with the instructions contained in your office letter No. 4259, dated the 10th September last, I have the honour to report that a careful inquiry has been made by Mr. Gokhle, Extra-Assistant Commissioner, as to the alleged increasing use of ganja among the Powars. The conclusions arrived at by Mr. Gokhle are as follows :—

2. It is true that there has been an increase of ganja consumption among Powars in this district, but not more so than among other classes. The increase of consumption among Powars may have attracted greater notice than that among others on account of the higher position of this caste in the social scale. It is perhaps erroneous to say that Powars had a prejudice against the use of the drug : what prejudice they may have had was merely that entertained by people generally, and might be more correctly described as want of familiarity with its use than any objection to it.

3. Purchases by Powars do not always represent consumption by them. There are a number of Powars who are large rice cultivators, and who in the transplanting season have to supply their labourers with some stimulant. Finding ganja to be cheaper than country liquor and quite as acceptable to their workmen, some Powars appear to have in this way made large purchases of ganja—not for their own use. The character and habits of Powars have not varied at all, so far as can be ascertained, in consequence of the more extended use by them of ganja. It has been mentioned that there is now a saying among Powars that a man who does not take ganja is nothing but a girl, but it does not appear that the taking of ganja has made these people more manly. It does not mean much more than that to take ganja is looked on as the sort of thing a grown man does, just as in England among boys smoking is sometimes looked on as a sign of emancipation from the school-room. It may to a certain extent refer to the supposed aphrodisiac qualities of the drug.

4. From the accompanying statements which Mr. Gokhle has had prepared, it will be seen that while the increase of ganja sales in shops where there are many Powars from 1891-92 to 1893-94 is only 31 per cent., that in shops where there are comparatively few Powar customers is, for the same period, 42 per cent. In the case of shops where there are no Powar purchasers the increase is only 12 per cent.; but this does not appear to be connected with the fact of the absence of people of this caste, but to be dependent on other circumstances. Among Powars, as among people of other castes, there has been an extension of the use of this drug in the last ten years; but the figures given in Mr. Gokhle's Statement II must not be taken to show a real increase in *consumption* to the extent of the increase in sales, since there is no doubt that a considerable amount of the increase is to be accounted for by the better arrangements now in force for the prevention of illegal ganja consumption. It is said that in the zemindaries on the south-eastern border of the district there used to be a good deal of ganja cultivation which has now been stopped, and that this ganja used formerly to be introduced into this district. But Mr. Gokhle's enquiries lead him to believe that, during the last four or five years in particular, the use of ganja has become more familiar to Powars, as well as to members of subordinate castes.

5. The reason why the report was not submitted by the date mentioned in the concluding portion of your letter was partly the fact that Mr. Gokhle was temporarily transferred from the district for two months in the close of 1893, and the enquiries on this subject consequently interrupted. Recently Mr. Gokhle has been on tour in the Tirrora tahsil, which is under his charge, and where the Powars are in great number, and he has thus had a good opportunity of ascertaining by personal enquiries how the matter stands.

STATEMENT I.

Showing the quantities of ganja sold at the ganja-shops in the Bhandara District during the years 1891-92 to 1893-94.

Name of tahsil.	Name of ganja-shop.	Ganja sales in seers.			Remarks.
		1891-92.	1892-93.	1893-94.	
Bhandara ...	Ambagarh	45	33	50	These ganja-shops have many Powars.
	Sihora	34	32	50	
	Bamhani	50	91	112	
Tirrora	Tirrora	70	72	88	
	Gondia	73	99	84	
	Rampaili	104	128	80	
	Gond Mohali ...	70	97	100	
	Fulchur	39	72	70	
	Katangi	27	...	...	
	Kati	71	124	133	
	Kurhari	53	63	72	
	Ekori	108	117	136	
	Total ...	744	928	975	
Bhandara ...	Tumsar	60	66	84	These ganja-shops have few Powars.
Tirrora	Beni	118	122	100	
	Katipur	52	79	78	
	Sarandi	26	33	31	
	Adasi	24	27	65	
	Murdara	83	113	183	
	Kamtha	53	69	87	
	Katori	58	50	65	
	Tirkheri	8	30	29	
	Sakhritola	67	49	72	
	Bijli	...	62	50	
	Amgaon	100	96	84	
	Lakhni	45	51	62	
	Total ...	694	847	990	
Sakoli Tahsil ...	Bhandara	70	73	86	These ganja-shops have no Powars.
Bhandara ...	Adyal	34	31	37	
	Pouni	44	46	60	
	Jamb	25	24	34	
	Amdhalgaon ...	34	29	40	
	Mohali	11	43	76	
Tirrora	Mundhri	55	43	36	The same contractor.
	Dewhara	46	8	18	
	Salekasa	41	...	...	
	Darekas	25	19	31	
Sakoli Tahsil ...	Sakoli	28	26	27	
	Pohora	25	19	24	
	Kitari	16	26	20	
	Palandur	14	12	30	
	Dighori	7	3	...	
	Lakhandur	41	37	27	
	Sangerhi	21	22	31	
	Nawegaon	30	16	21	
	Palandur (Chichgarh) ...	...	14	24	
	Arjuni	40	43	53	
	Chichewara	23	32	31	
	Total ...	630	569	706	
	Grand Total ...	2,068	2,344	2,671	

STATEMENT II.

Showing sale of ganja in the whole district.

Year.	Maunds.	Seers.	Remarks.
1879-80	25	37	
1880-81	35	20	
1881-82	38	7	
1882-83	31	20	
1883-84	40	3	
1884-85	48	19	
1885-86	65	23	
1886-87	41	27	
1887-88	35	16	
1888-89	42	16	
1889-90	46	5	
1890-91	48	24	
1891-92	54	15	
1892-93	61	36	
1893-94	66	35	Ten months' actuals,—55 maunds 29 seers.

BULLETIN ON THE CULTIVATION AND MANUFACTURE OF GANJA IN MADRAS, BY MR. C. BENSON, M.R.A.C., DEPUTY DIRECTOR, AGRICULTURAL BRANCH, MADRAS.

The true hemp plant (*Cannabis sativa*), though grown here and there in most parts of the presidency in backyards, is found as a regularly-cultivated field crop in only two localities, *viz.*, in the Malayali villages on the Javadi hills in North Arcot, and in one or two villages in the Bapatla taluk of Kistna District. It is also raised to a certain extent in the hilly parts of Vizagapatam and Ganjam, but there seldom more than a few plants are grown by each person.

The Javadis are a low hill range covered with jungle, amongst which the Malayali villages lie scattered, few of them consisting of more than three or four huts. Each village has a small patch of land cleared for cultivation near by, and there, in almost all cases, a plot or two of hemp will be found growing. The Malayalis claim to be Vellalas, but except for purposes of trade and barter have little or no connection with the people of the plains. They also claim to alone possess the knowledge necessary for the manufacture of ganja—a practice which has been carried on, they state, in these hills from time immemorial. They attribute the fact that the growth of the crop is confined to the hills merely to the ignorance of the people of the plains, and state that if the latter knew how to deal with the crop, they would easily grow it outside the hills.

On the hills cultivation is carried on in small plots, the natural fall of the ground preventing any considerable tolerably level area being found in one place, although to a certain extent the plots are terraced. In these plots the Malayalis raise the ordinary dry food-grains of the country for their own consumption, and with them the hemp plant alternates, hemp not being ordinarily taken on the same land in two successive years. The soil is free, friable, and open, derived directly from the rocks on which it rests; thoroughly well-drained, and appears to be fairly fertile. For hemp it receives a heavy dressing of cattle dung, without which it is said to be hopeless to raise the crop. This manure is spread on the surface in May, or June, before the first rains allow of ploughing being begun. As soon as the land is sufficiently moistened, it is ploughed and the operation is repeated three or four times at convenient intervals until some time in July, when the seed is sown. Sowing is done by dropping the seed, at the rate of five or six sers per acre, in a furrow opened with a plough, the seed being covered with soil drawn over it by the feet of the sower. The seed is sown in rows about three feet apart, and during the growth of the crop the spaces between the rows are worked and kept clean by ploughing and weeding. The young plants appear in about a week after sowing, and when about three weeks old they are partially thinned out, and when they reach to a foot high they are earthed up by means of a plough, which is run along on either side of the rows. This latter process, aided by hand-weeding at intervals of about a fortnight, thrice repeated, keeps the whole land clean.

When the crop is about four months old, the anxieties of the cultivator commence and the crop has to be examined carefully and frequently, so that any male plants—called female by the ryots—may be detected and removed. Detection of the male plants is only possible when the flowers appear. Their entire removal is absolutely essential to securing a crop of ganja, as otherwise the whole crop runs to seed. The removal of the male plants is a continuous process, going on as the plants are detected. Notwithstanding this care a certain amount of seed actually sets.

Some time early in January the harvest begins. It continues up to March. Plants are ready for cutting as soon as the leaf turns yellow and begins to drop. At the same time the spikes of female flowers also turn yellow. The crop is never cut on a damp or cloudy day.

In harvesting, the ripe plants are cut bodily, tied into small bundles, and carried to the threshing-floor of the village. There the spikes are stripped off the stems, with a few of the leaves, and the stems are thrown away. The material thus collected is spread out on the floor in the sun during the middle of the day for three, four, or five hours, and then loosely rolled in the hand to work out such seed as may have been formed and to break up the leaf that remains. This working also causes the spikes to stick to one another to some extent. The broken leaf is then winnowed out, collected, and powdered.

The manufacture then begins. A closely-woven bamboo basket is taken and dusted inside with leaf powder. Into it is placed a layer of the spikes an inch or an inch and a half deep. The spikes are then trodden under foot by a man working round and round on his heels in the basket four or five times: the man supporting himself on a stick, whilst the basket is held steady by two others. If the basket be large enough two men do the treading, grasping each other's shoulders to steady themselves. Layer over layer of the spikes is thus made in the basket till it is full, each layer being separated from the next by a little leaf-dust. When the basket is full, its contents are turned out on a piece of flat hard ground, and on the top of

the pile a large flat stone is placed, upon which are piled other stones to weight and compress the heap. The weights remain thus till next morning at about 8 or 9 A.M., when each layer is taken out separately, broken into small bits, and spread in the sun to dry. Whilst spread out thus, the pieces are trampled on with the heel and turned over from time to time to secure proper drying. In the evening the pieces are again re-piled and weighted and next day again turned out to dry; the process being repeated till the whole is thoroughly dried.

Great importance is attached to the thoroughness of the treading, the sufficiency of the pressing, and the completeness of the drying; the quality of the drug being said to depend on the manner in which these processes are carried out. If the cakes are not dried sufficiently they appear green, and are of inferior quality—good ganja being brown.

When fully cured the cakes are stored in the ryot's houses, where they are packed in date mats in bundles each containing 20 visses (say 60 lb.) and kept under pressure till sold to dealers.

In the *Kistna District* the soil, the conditions under which the crop is grown, and the method of manufacture all differ entirely from those described above, as much as they do from the practice in Bengal, according to Dr. Prain's description. It is only in one village, Daggupad, in the Bapatla taluk, not far from the borders of Nellore, and about 15 miles from the sea coast, that any considerable area of the crop is to be found, although a little is also grown in one or two of the neighbouring villages. The country is a wide open plain of black cotton-soil, and from its appearance badly or poorly drained. The soil is not particularly stiff for the description concerned, being in fact a good stiff loam, and contains a considerable amount of kankar. On the land on which hemp is grown, the common crops with which it usually alternates are noted on the margin. The crop is grown in open fields, some near to, and some at a distance from the village, but all reasonably accessible. In some cases it is cultivated, and handled by the ryot who owns the land; but more frequently the cultivation of the land, and all the cattle labour required is supplied by the ryot, and the planting and handling of the crop is undertaken by others—chiefly Muhammadans, of whom there is a considerable settlement in this village. Here, as in Bengal, the plants are raised in seed-beds and planted out, but except at the time of planting, no irrigation is resorted to after the crop is put out into the field.

Jonna (*Sorghum vulgare*).	Coriander.
Variga (*Panicum miliaceum*).	Tobacco.
Dry paddy.	Indigo.
	Chillies.

The seed-beds are usually made on the bund of a tank, and are 6 feet wide by 60 feet long. The soil of these beds is dug up with a crowbar and reduced to a fine tilth and levelled. Seed is thus sown at the rate of 4 or 5 sers (of 85 tolahs) to a bed; two such beds supplying plants sufficient for an acre of land. The seed is covered with earth strewn over it by hand. The bed is then watered by hand and the watering is repeated daily for about two months as required. The sowing takes place in August. When the plants are 2 feet high they are lopped off, and in a few days numerous side branches are put out. The plants are then transplanted into the field.

Land intended for hemp may have carried a crop of hemp in the previous year—19 out of 118 acres planted in Daggupad* this year (1893-94) being said to have carried hemp in 1892-93—but more usually the crop is alternated with one of those mentioned above. If it follows hemp, heavy manuring is necessary. Cultivation of the land for the crop usually begins with ploughing in July, and between then and October it is ploughed about three times and finally worked with the three-lined grubber (*gorru*, or seed drill used without its seed hopper and tubes). It is then marked off in 2 feet squares with a marker, similar to the *guntaka*, or scuffle worked without its share. At the angles of each square four or five plants are dibbled into a hole made with a stick, and then they are watered to set the plants. The crop is planted out in October.

The land intended for this crop is manured either with cattle manure or by sheep-folding, the application of manure being considerable when the land carries hemp successively year after year.

* The crop records of Daggupad give the following results:—

	In 1892.	In 1893.
	ACRES.	ACRES.
Of the land sown with ganja	86--29.	117--84.
Carried—	In 1893.	In 1892.
Ganja	19·09	19 09
Jonna	1·00	25·59
Variga	23·19	20·63
Dry paddy	3·60	8·0
Tobacco	20·35	13·30
Chillies	2·81	2·50
Coriander	4·72	8·27
Indigo	1·69	15·96
Not sown	9·84	4·50

A month after planting the fields are hand-weeded, and about a fortnight later a plough is run between the rows, and the plants are earthed up slightly. Two months after planting out flowering begins, and then the removal of the male (here as elsewhere termed *female*) plants begins. They are cut off near the roots and thrown away. This work goes on continuously as long as male plants are found.

About February the plant begins to ripen and the harvest commences. It goes on till the end of March. The plants are cut bodily with the sickle, and are laid out in the field, where they grow for three days to dry in the sun. On the fourth day they are tied into small bundles of about ten plants each, and then piled, head and tail, in the field. The heaps are opened, and the bundles re-piled next day, the process being repeated over several days. When the quantity to be dealt with is small and space allows, the bundles are carried to the grower's house and there piled; but in all cases the crop is finally carried to the house, and a month later the spikes are removed. Each spike is plucked off by hand and then they are spread out on a hard floor in the open for one night in the dew to soften and become pliable. In the morning the spikes are collected and stored in large gunny-bags, being packed closely therein by a man treading them down into the bag. The produce is then ready for sale, and may be kept for as much as two years.

In both localities it is stated that of late years the area planted with hemp has been reduced, the price offered for ganja having fallen with the restriction of the demand owing to the introduction of the system of licensing retail vendors.

A few years ago, the crop was also grown to some extent in one village in the Pulivendla taluk, Cuddapah District, but its growth there has now been abandoned. It was then grown as a garden crop, in rotation with garden *korra* (*Setaria italica*) or garden ragi (*Eleusine coracana*), the plants being raised in seed-beds and then planted out. The method of manufacture adopted there appears to have resembled that still followed in Kistna.

NOTE BY MR. G. A. GRIERSON, C.I.E., MAGISTRATE AND COLLECTOR, HOWRAH, ON REFERENCES TO THE HEMP PLANT OCCURRING IN SANSKRIT AND HINDI LITERATURE.

I have the honour to state that I have searched through all the Sanskrit and Hindi books accessible to me, and to forward the accompanying note on the references to the hemp plant occurring in the literatures of those languages.

I have met the hemp plant in Sanskrit and Hindi literature under various names. The principal are—

(1) Bhanga.

(2) Indrāçana.

(3) Vijayā or Jayā.

The earliest mention of the word ganja which I have noted is dated about the year 1800 A.D.

Whenever the word vijayā is used, it is doubtful whether the hemp plant is meant, or the yellow myrobolan, as the word means both.

The name bhanga occurs in the Atharvavēda (say, B.C. 1400). The hemp plant is there mentioned simply as a sacred grass. Pānini (say, B.C. 300) mentions the pollen of the hemp flower (bhangā). In the commencement of the sixth century we find the first mention of vijayā which I have noted. It is a sacred grass, and probably means here the hemp plant.

The first mention of bhanga as a medicine which I have noted is in the work of Suçruta (before the eighth century A.D.), where it is called an antiphlegmatic. During the next four centuries bhangā (feminine) frequently occurs in native Sanskrit dictionaries in the sense of hemp-plant.

In the tenth century the intoxicating nature of bhang seems to have been known : and the name *Indrāçana*, Indra's food, first appears, so far as I know, in literature. Its intoxicating power was certainly known in the beginning of the fourteenth century. In a play written in the beginning of the sixteenth century, it is mentioned as being consumed by jogis (Çaiva mendicants). It is there named "Indra's food."

In later medical works it is frequently mentioned under various names.

I append a more detailed account of the passages in which I have noted the uses of the Indian hemp.

I may add that I have not traced in literature any difference between the uses of the word ganja and of the word bhanga, though modern *kavirājas* tell me that they are distinct plants.

Cir. B.C. 1400. In the *Atharvavēda* (cir. 1400 B. C.) the bhang plant is mentioned (11, 6, 15) once :—

"We tell of the five kingdoms of herbs headed by Sōma ; may it and *kuça* grass, and *bhanga* and barley, and the herb *saha* release us from anxiety."

Here reference is evidently made to the offering of these herbs in oblations.

Cir. B. C. 300. The grammarian Panini (5, 2, 29) mentions *bhangākata*, the pollen of the hemp flower, as one of his examples.

The fact that the pollen of this special flower was quoted is worth noting.

A. D. 504. Varāhamihira in his *Brihatsamhitā* (XLVIII, 39) mentions *vijayā* as used with other grasses in the rites of the *Pusya*, bathing festival.

Vijayā in this passage certainly means some plant or other. The word may mean either the Indian hemp-plant or be a synonym of *harītakī* (the yellow myrobolan). Dr. Hœrnle informs me that in the oldest medical works the word is explained by commentators in the latter sense. It is doubtful what meaning we are to adopt here. The word *may* mean the hemp-plant *bhanga*. In the passage from the Atharvavēda, already quoted, amongst the five plants special honoured as oblations, *bhanga* is closely connected with the herb *saha*. So also in the Brihatsamhitā, *vijayā* is mentioned as one of a long list of plants to be used in the offering, and the very next plant mentioned is *sahā*, which is apparently the same as *saha*.

This would encourage the theory that the *vijayā* of the Brihatsamhita was more probably the same as the *bhanga* of the Atharvavēda.

In Suçruta (Ut. XI, 3) *Bhanga* is recommended together with a number of other drugs as an antiphlegmatic.

Before the eighth century.

Vijayā is mentioned in the same work as a remedy for catarrh accompanied by diarrhœa (Ut. XXIV, 20, and Ut. 39, page 415, 20), as an ingredient in a prescription for fever arising from an excess of bile and phlegm. In these two passages, however, *vijayā* is probably an equivalent of *harītakī*, the yellow myrobolan, and does not mean hemp.

In the various *kōsas*, or dictionaries, *bhangā* is frequently mentioned as meaning the hemp-plant. Thus,—

(1) *Amarakōsa*, 2, 9, 20.

Cir. A. D. 500. (2) *Trikāndaçēsa*, 3, 364.

Tenth or eleventh century. (3) *Hēmacandra's Anēkārthakōsa*, 2, 37.

Twelfth century. (4) *Hēmakandra's Abhidhānacintāmaṇi*, 1179.

The *Sārasundarī* (date not known to me), a commentary on the Amarakōsa mentioned above, by Mathureça, and quoted in the Çabdakalpadruma, mentions that the seed of the *bhanga* plant is the size of that of millet (*kalāya*).

Twelfth century.

Cakrapānidatta is said to have flourished under Nayapāla, a prince who reigned in the eleventh century A.D. In his *Çabdacandrikā*, a medical vocabulary, he gives the following Sanskrit names for bhang :—

Cir. 1050 A.D.

(1) *Vijayā* (victorious), (2) *Trailōkyavijayā* (victorious in the three worlds), (3) *bhangā*, (4) *Indrāçana* (Indra's food), (5) *Jayā* (victorious).

These names seem to show that its use as an intoxicant was then known.

The *Rājanighantu* of Narahari Pandita adds the following names to those given by Cakrapānidatta in the *Çabdacandrikā* above mentioned :—

A.D. 1300.

(6) *Vīrapattra* (hero-leaved or the leaf of heroes),

(7) *Ganjā*,

(8) *Capalā* (the light-hearted),

(9) *Ajayā* (the unconquered),

(10) *Ānandā* (the joyful),

(11) *Harsinī* (the rejoicer),

and adds that the plant possesses the following qualities :—

(1) *Katutva* (acridity) ; (2) *kasāyatva* (astringency) ; (3) *Usnatva* (heat) ; (4) *tiktatva* (pungency) ; (5) *vātakaphāpahatva* (removing wind and phlegm) ; (6) *samgrāhitva* (astringency) ; (7) *vākpradatva* (speech-giving) ; (8) *balyatva* (strength-giving) ; (9) *mēdhākāritva* (inspiring of mental power) ; (10) *çrēsthadīpanatva* (the property of a most excellent excitant).

The *Çārngadhrasamhitā*, a medical work by Çārngadhara, the date of which is unknown, but which must have been compiled during the Muhammadan period of Indian History, specially mentions (I, 4, 19) [1] *bhanga* as an excitant (*vyavāyin*). In the same passage it mentions opium.

Say A.D. 1500.

The *Dhūrtasamāgama*, or "Rogues' Congress," is the name of an amusing if coarsely written farce of about the year 1500 A.D., the author of which was one Jyōtirīça. In the second act two Çaiva mendicants came before an unjust judge, and demand a decision on a quarrel which they have about a nymph of the bazar. The judge demands payment of a deposit before he will give any opinion. One of the litigants says—

A. D. 1500.

"Here is my ganja bag ; let it be accepted as a deposit."

THE JUDGE (*taking it pompously, and then smelling it greedily*) :—"Let me try what it is like (*takes a pinch*). Ah ! I have just now got by the merest chance some ganja which is

[1] I quote the MS. in the Library of the A. S. B.

soporific and corrects derangements of the humours, which produces a healthy appetite, sharpens the wits, and acts as an aphrodisiac."

The word used for ganja in the above is *Indrāçana* (Indra's food).

The *Bhāvaprakaça*, another medical work written by Bhavadēvamiçra (cir. A.D. 1600),[1] has as follows :—

Cir. A.D. 1600.

Bhangā gañjā mātulānī mādinī vijayā jayā |
Bhangā kaphaharī tiktā grāhinī pācanī laghuh |
Tīksōsnā pittalā mōha- -mada-vāg-vahni-vardhinī||

" *Bhanga* is also called *gañjā*, *mātulānī*, *mādinī* (the intoxicating), *vijayā* (the victorious) and *jayā* (the victorious). It is antiphlegmatic, pungent, astringent, digestive, easy of digestion, acid, bile-affecting ; and increases infatuation, intoxication, the power of the voice, and the digestive faculty."

" The *Rājavallabha*, a *materia medica*, by Nārāyanadāsa kavirāja, the date of which I do not know, but which is quoted in the *Çabdakalpadruma*, and is believed to be ancient, has the following :—

17th century.

Çakrā-'çanam tu tīksnō-'snam mōha-krit kustha-nāçanam |
Bala-mēdhā-'gni-krit-çlēsma- -dōsa-hāri rasāyanam||
Jātā mandara-manthanāj jala-nidhau pīyūsa-rūpā purā |
Trailōkyē vijaya-pradē 'ti vijayā çri-dēvarāja-priyā||
Lōkānām hita-kāmyāya ksiti-talē-prāptā naraih kāmadā |
Sarvā-" tanka-vināça-harsa-jananī yaih sēvitā sarvadā.||

" Indra's food (*i.e.*, ganja) is acid, produces infatuation, and destroys leprosy. It creates vital energy, the mental powers, and internal heat, corrects irregularities of the phlegmatic humour, and is an elixir vitæ. It was originally produced, like nectar, from the ocean by the churning with Mount Mandara,[2] and inasmuch as it gives victory in the three worlds, it, the delight of the king of the gods, is called *vijayā*, the victorious. This desire-fulfilling drug was obtained by men on the earth, through desire for the welfare of all people. To those who regularly use it it begets joy and destroys every anxiety."

The *Rasapradhīpa*, a work, the date of which is unknown to me, and which is quoted in the *Çabdakalpadruma* mentions *jayā* as a remedy for indigestion :—

? Date.

Ksāratrayam sūtagandhōu pancakōlam idam çubham |
Sarvaīs tulyā jayā bhristā tad-ardhā çigrujā jatā||

Natron, saltpetre and borax, mercury and sulphur, and the prosperous five spices (long pepper, its root, *piper chaba*, another pepper, and dry ginger). To these add an equal amount of parched *jayā* and half of that amount of horse-radish (*moringa*) and *jatā*.[3]

It is not certain whether *jayā* here means bhang or *Harītakī* (yellow myrobolan). The word has both significations. The latter, perhaps, suits the formula best.

In the *Rasaratna-samuccaya*, a work written in the south of India, *jayā* is classified as a semi-poison,—

Lāngolī visamustiç ca karavīrō jayā tathā |
? Date.
Tilakah kanakō 'rkaç ca varyō hy upavisātmakah.||

Lāngalī[4] (Vanguiera spinosa), the root of the Nerium odorum, *jayā* (Symplocos racemosa) *kanaka*[5] and *āk* (a kind of Euphorbia), are semi-poisonous.

Bhang is frequently mentioned by vernacular poets. The oldest instance with which I am acquainted is the well-known hymn by Vidyāpati Thākur (1400 A.D.), in which he calls Çiva " *Digambara bhanga*," in reference to his habit of consuming that drug. According to an old Hindu poem, on which I cannot now lay my hands, Çiva himself brought down the

1400 A.D.

[1] According to Dutt "not before 1535 A.D."

[2] Nectar was produced in this fashion.

[3] The name of several plants ; I do not know which is meant here.

[4] The name of several plants,—Jussiæa Repens, Hemionitis cordifolia, Rubia munjista, Hedysarum Lagopodioide.

[5] Said by a kaviraja to mean dhatura.

bhang plant from the Himalayas and gave it to mankind. Jōgis are well-known consumers of bhang and ganja, and they are worshippers of Çiva.

In folk-songs, ganja or bhang (with or without opium) is the invariable drink of heroes before performing any great feat. At the village of Bauri in Gaya there is a huge hollow stone, which is said to be the bowl in which the famous hero Lōrik mixed his ganja. Lōrik was a very valiant general, and is the hero of numerous folk-songs. The epic poem of Alhā and Rūdal, of uncertain date, but undoubtedly based on very old materials (the heroes lived in the twelfth century A.D.), contains numerous references to ganja as a drink of warriors. For instance, the commencement of the canto dealing with Alhā's marriage, describes the pestle and mortar with which the ganja was prepared, the amount of the intoxicating drink prepared from it (it is called *sabzī*) and the amount of opium (an absurdly exaggerated quantity) given to each warrior in his court.

That the consumption of bhang is not considered disreputable among Rajputs may be gathered from the fact that Ajabēs, who was court poet to the well-known Maharaja Bishwanath Singh of Riwa, wrote a poem praising bhang and comparing *siddhi* to the "success" which attends the worshipper of "Hari." Here there is an elaborate series of puns. The word *siddhi* means literally 'success,' and *hari* means not only the god Hari, but also bhang.

NOTE BY MR. J. M. CAMPBELL, C.I.E., COLLECTOR OF LAND REVENUE AND CUSTOMS AND OPIUM, BOMBAY, ON THE RELIGION OF HEMP.

To the Hindu the hemp plant is holy. A guardian lives in the bhang leaf. As the wife of Vishnu, the preserver, lives in the hysteria-curing *tulsi*, or Holy Basil, and as Shiva dwells in the dysentery-scaring *bel*, Ægle marmelos, so the properties of the bhang plant, its power to suppress the appetites, its virtue as a febrifuge, and its thought-bracing qualities show that the bhang leaf is the home of the great Yogi or brooding ascetic Mahadev.

So holy a plant should have special rearing. Shiva explains to his wife, Parvati, how, in sowing hemp seed, you should keep repeating the spell 'Bhangi,' 'Bhangi,' apparently that the sound of that guardian name may scare the evil tare-sowing influences. Again, when the seedlings are planted the same holy name must be repeated, and also at the watering which, for the space of a year, the young plants must daily receive. When the flowers appear the flowers and leaves should be stripped from the plant and kept for a day in warm water. Next day, with one hundred repetitions of the holy name Bhangi, the leaves and flowers should be washed in a river and dried in an open shed. When they are dry some of the leaves should be burnt with due repeating of the holy name as a *jap* or muttered charm. Then, bearing in mind Vāgdēvatā, or the goddess of speech, and offering a prayer, the dried leaves should be laid in a pure and sanctified place. Bhang so prepared, especially if prayers are said over it, will gratify the wishes and desires of its owner. Taken in the early morning such bhang cleanses the user from sin, frees him from the punishment of crores of sins, and entitles him to reap the fruits of a thousand horse-sacrifices. Such sanctified bhang taken at day break or noon destroys disease. Before the religious user of bhang stand the Ashtadēvatā or Eight Guardians with clasped hands ready to obey him and perform his orders. The wish of him who with pure mind pours bhang with due reverence over the Ling of Mahadev will be fulfilled.

Such holiness and such evil-scaring powers must give bhang a high place among lucky objects. That a day may be fortunate the careful man should on waking look into liquid bhang. So any nightmares or evil spirits that may have entered into him during the ghost-haunted hours of night will flee from him at the sight of the bhang and free him from their blinding influences during the day. So too when a journey has to be begun or a fresh duty or business undertaken it is well to look at bhang. To meet some one carrying bhang is a sure omen of success. To see in a dream the leaves, plant, or water of bhang is lucky; it brings the goddess of wealth into the dreamer's power. To see his parents worship the bhang-plant and pour bhang over Shiva's Ling will cure the dreamer of fever. A longing for bhang foretells happiness: to see bhang drunk increases riches. No good thing can come to the man who treads under foot the holy bhang leaf.

So evil-scaring and therefore luck-bringing a plant must play an important part in the rites required to clear away evil influences. During the great spirit time of marriage in Bombay among almost all the higher classes of Gujarat Hindus, of the Jain as well as of the Brahmanic sects, the supplies sent by the family of the bride to the bridegroom's party during their seven days' sojourn includes a supply of bhang. The name of the father who neglects to send bhang is held in contempt. Again, after the wedding, when the bridegroom and his friends are entertained at the house of the bride, richly-spiced bhang is drunk by the guests. The Gujarat Musalman bride before and after marriage drinks a preparation of bhang. Among the Pardeshi or North Indian Hindus of Bombay bhang is given not only at weddings, but the Pardeshi who fails to give his visitor bhang is despised by his caste as mean and miserly. Another great spirit time during which bhang plays an important part is the time of war. Before the outbreak of a war and during its progress the Ling of Mahadev should be bathed with bhang. Its power of driving panic influences from near the god has gained for bhang the name of Vijayā, the unbeaten. So a drink of bhang drives from the fighting Hindu the haunting spirits of fear and weariness. So the beleagured Rajput, when nothing is left but to die, after loosing his hair that the bhang spirit may have free entrance, drinks the sacramental bhang and rushing on the enemy completes his *juhár* or self-sacrifice. It is this quality of panic-scaring that makes bhang, the Vijayā or Victorious, specially dear to Mahadev in his character of Tripur, the slayer of the demon Tripurasur. As Shiva is fond of *bel* leaves, as Vishnu is fond of *tulsi* leaves, so is Tripuresvar fond of bhang leaves. He who wishes to obtain his desires must constantly offer bhang to Tripuresvar.

Bhang the cooler is a febrifuge. Bhang acts on the fever not directly or physically as an ordinary medicine, but indirectly or spiritually by soothing the angry influences to whom the heats of fever are due. According to one account in the Ayurveda, fever is possession by the hot angry breath of the great gods Brahma, Vishnu, and Shiva. According to another passage in the Ayurveda, Shankar or Shiva, enraged by a slight from his father-in-law Daksha, breathed from his nostrils the eight fevers that wither mankind. If the fever-stricken performs

the Vijayā abhishek, or bhang-pouring on the Ling of Shankar, the god is pleased, his breath cools, and the portion of his breath in the body of the fever-stricken ceases to inflame. The Kashikhanda Purana tells how at Benares, a Brahman, sore-smitten with fever, dreamed that he had poured bhang over the self-sprung Ling and was well. On waking he went to the Ling, worshipped, poured bhang and recovered. The fame of this cure brings to Benares sufferers from fever which no ordinary medicine can cure. The sufferers are laid in the temple and pour bhang over the Ling whose virtue has gained it the name Jvareshwar, the Fever-Lord. In Bombay many people sick of fever vow on recovery to pour bhang over a Ling. Besides as a cure for fever bhang has many medicinal virtues. It cools the heated blood, soothes the over-wakeful to sleep, gives beauty, and secures length of days. It cures dysentery and sunstroke, clears phlegm, quickens digestion, sharpens appetite, makes the tongue of the lisper plain, freshens the intellect, and gives alertness to the body and gaiety to the mind. Such are the useful and needful ends for which in his goodness the Almighty made bhang. In this praise of the hemp the Makhzan or great Greek-Arab work on drugs joins. Ganja in excess causes abscess, even madness. In moderation bhang is the best of gifts. Bhang is a cordial, a bile absorber, an appetiser, a prolonger of life. Bhang quickens fancy, deepens thought, and braces judgment.

As on other guardian-possessed objects, the cow, the Vedas, or the leaf of the *bel* tree, oaths are taken on the bhang leaf. Even to a truthful witness an oath on the bhang leaf is dreaded. To one who foreswears himself the bhang oath is death.

So holy a plant must play a leading part in temple rites. Shiva on fire with the poison churned from the ocean was cooled by bhang. At another time enraged with family worries the god withdrew to the fields. The cool shade of a plant soothed him. He crushed and ate of the leaves, and the bhang refreshed him. For these two benefits bhang is Shankarpriya, the beloved of Mahadev. So the right user of bhang or of ganja, before beginning to drink or to smoke, offers the drug to Mahadev saying, lena Shankar, lena Babulnath: be pleased to take it Shankar, take it Babulnath. According to the Shiva Purana, from the dark fourteenth of Magh (January-February) to the light fourteenth of Ashadh (June-July), that is, during the three months of the hot weather, bhang should be daily poured over the Ling of Shiva. If not every day, bhang should be poured at least during the first and last days of this period. According to the Meru Tantra on any Monday, especially on Shravan (July-August) Mondays, on all twelfths or *pradoshs*, and on all dark fourteenths or *shivratris*, still more on the Mahashivratri or Shiva's Great Night on the dark fourteenth of Magh (January-February), and at all eclipses of the sun or moon, persons wistful either for this world or for the world to come should offer bhang to Shiva and pour it over the Ling. Not every devotee of Shiva makes offerings of bhang. Such rites in Bombay are seldom performed except in the Bhuleswar and Babulnath temples and there only on special occasions. The bhang offered to Mahadev is without pepper or other spice. It is mixed with water, water and milk, or milk and sugar. It is poured over the Ling. According to some authorities the offerer should not touch the offered bhang. Temple ministrants Atits, Tapodhans, Bhojaks, Bhopis, Bharadis, Guravas alone should drink it. If there are no ministrants the remains of the offering should be poured into a well or given to cows to drink. Other authorities encourage the offerer to sip the bhang, since by sipping the bhang reaches and soothes the Shiva-Shakti or Shiva-spirit in the sipper. On certain special occasions during failures of rain, during eclipses, and also in times of war libations of bhang are poured over the Ling.

Vaishnavas as well as Shaivas make offerings of bhang. The form of Vishnu or the Guardian to whom bhang is a welcome offering is Baladev, Balaram, or Dauji, the elder brother of Krishna. Baladev was fond of spirits, not of bhang. But Banias, Bhatias, and other high class Hindus, not being able to offer spirits, instead of spirits present bhang. In Bombay the offering of bhang to Baladev, unlike the special offerings to Shiva, is a common and every-day rite. Without an offering of bhang no worship of Baladev is complete. Unlike the plain or milk and sugared bhang spilt over the Ling, Baladev's bhang is a richly-spiced liquid which all present, including the offerer, join in drinking. Such social and religious drinking of bhang is common in Bombay in the temple of Dauji in Kalyan Kirparam lane near Bhuleshwar. As in the higher class worship of Baladev the liquor offering has been refined into an offering of bhang so it is in the worship of Devi, Shiva's early and terrible consort. On any Tuesday or Friday, the two week-days sacred to Devi, still more during the Navratra or Nine Nights in Ashwin or September-October, those whose caste rules forbid liquor make a pleasing spiced bhang. And as in the worship of Baladev all present, worshipper and ministrant alike, join in drinking. Shitaladevi, the Cooler, the dread goddess of small-pox, whose nature, like the nature of bhang, is cooling, takes pleasure in offerings of bhang. During epidemics of small-pox the burning and fever of the disease are soothed by pouring bhang over the image of Shitaladevi. So for the feverishness caused by the heats especially to the old no cure equals the drinking of bhang. Unlike spirits the tempter to flesh bhang the craver for milk is pleasing to the Hindu religion. Even according to the straitest school of the objectors to stimulants, while to a high caste Hindu the penalty for liquor-drinking is death, no penalty attaches to the use of bhang, and a single day's fast is enough to cleanse from the coarser spirit of *ganja*. Even among those who hold stimulants to be devil-possessed penalty and disfavour attach to the use of hemp drugs only when they are taken with no religious object and without observing the due religious rites.

At the other extreme of Hindu thought from the foes to stimulants, to the worshippers of the influences that, raising man out of himself and above mean individual worries, make him one with the divine force of nature, it is inevitable that temperaments should be found to whom the quickening spirit of bhang is the spirit of freedom and knowledge. In the ecstasy of bhang the spark of the Eternal in man turns into light the murkiness of matter or illusion and self is lost in the central soul-fire. The Hindu poet of Shiva, the Great Spirit that living in bhang passes into the drinker, sings of bhang as the clearer of ignorance, the giver of knowledge. No gem or jewel can touch in value bhang taken truly and reverently. He who drinks bhang drinks Shiva. The soul in whom the spirit of bhang finds a home glides into the ocean of Being freed from the weary round of matter-blinded self. To the meaner man, still under the glamour of matter or *māyā*, bhang taken religiously is kindly thwarting the wiles of his foes and giving the drinker wealth and promptness of mind.

In this devotion to bhang, with reverence, not with the worship, which is due to Allah alone, the North Indian Mussalman joins hymning the praises of bhang. To the follower of the later religion of Islam the holy spirit in bhang is not the spirit of the Almighty. It is the spirit of the great prophet Khizr or Elijah. That bhang should be sacred to Khizr is natural. Khizr is the patron saint of water. Still more Khizr means green, the revered colour of the cooling water of bhang. So the Urdu poet sings 'When I quaff fresh bhang I liken its colour to the fresh light down of thy youthful beard.' The prophet Khizr or the Green prophet cries 'May the drink be pleasing to thee.' Nasir, the great North Indian Urdu poet of the beginning of the present century, is loud in the praises of his beloved Sabzi, the Green one. 'Compared with bhang spirits are naught. Leave all things thou fool, drink bhang.' From its quickening the imagination Musalman poets honour bhang with the title *Warak al Khiyall*, Fancy's Leaf. And the Makhzan or great Arab-Greek drug book records many other fond names for the drug. Bhang is the Joy-giver, the Sky-flier, the Heavenly-guide, the Poor Man's Heaven, the Soother of Grief.

Much of the holiness of bhang is due to its virtue of clearing the head and stimulating the brain to thought. Among ascetics the sect known as Atits are specially devoted to hemp. No social or religious gathering of Atits is complete without the use of the hemp plant smoked in ganja or drunk in bhang. To its devotee bhang is no ordinary plant that became holy from its guardian and healing qualities. According to one account, when nectar was produced from the churning of the ocean, something was wanted to purify the nectar. The deity supplied the want of a nectar-cleanser by creating bhang. This bhang Mahadev made from his own body, and so it is called *angaj* or body-born. According to another account some nectar dropped to the ground and from the ground the bhang plant sprang. It was because they used this child of nectar or of Mahadev in agreement with religious forms that the seers or Rishis became Siddha or one with the deity. He who, despite the example of the Rishis, uses no bhang shall lose his happiness in this life and in the life to come. In the end he shall be cast into hell. The mere sight of bhang cleanses from as much sin as a thousand horse-sacrifices or a thousand pilgrimages. He who scandalises the user of bhang shall suffer the torments of hell so long as the sun endures. He who drinks bhang foolishly or for pleasure without religious rites is as guilty as the sinner of *lakhs* of sins. He who drinks wisely and according to rule, be he ever so low, even though his body is smeared with human ordure and urine, is Shiva. No god or man is as good as the religious drinker of bhang. The students of the scriptures at Benares are given bhang before they sit to study. At Benares, Ujjain, and other holy places yogis, bairagis and sanyasis take deep draughts of bhang that they may centre their thoughts on the Eternal. To bring back to reason an unhinged mind the best and cleanest bhang leaves should be boiled in milk and turned to clarified butter. Salamisri, saffron, and sugar should be added and the whole eaten. Besides over the demon of Madness bhang is Vijayā or victorious over the demons of hunger and thirst. By the help of bhang ascetics pass days without food or drink. The supporting power of bhang has brought many a Hindu family safe through the miseries of famine. To forbid or, even seriously to restrict the use of so holy and gracious a herb as the hemp would cause widespread suffering and annoyance and to the large bands of worshipped ascetics deep-seated anger. It would rob the people of a solace in discomfort, of a cure in sickness, of a guardian whose gracious protection saves them from the attacks of evil influences, and whose mighty power makes the devotee of the Victorious, overcoming the demons of hunger and thirst, of panic fear, of the glamour of Māyā or matter, and of madness, able in rest to brood on the Eternal, till the Eternal, possessing him body and soul, frees him from the haunting of self and receives him into the ocean of Being. These beliefs the Musalman devotee shares to the full. Like his Hindu brother the Musalman fakir reveres bhang as the lengthener of life, the freer from the bonds of self. Bhang brings union with the Divine Spirit. 'We drank bhang and the mystery I am He grew plain. So grand a result, so tiny a sin.'

NOTE BY BABU ABHILAS CHANDRA MUKERJI, SECOND INSPECTOR OF EXCISE, BENGAL, ON THE ORIGIN AND HISTORY OF TRINATH WORSHIP IN EASTERN BENGAL.

Date of origin.—In 1867 Babu Ananda Chandra Kali or Kailai, of Dhamrai, a village in thana Sabhar of the Dacca district, first started the worship at the house of his father-in-law at Fattehpur in the Atia pargana of the Mymensingh district (sub-division Tangail).

Antecedents of the originator.—Dhamrai is an important village in the Dacca district noted for its car festival, which is annually held in honour of a local idol named *Madhab Thakur*, and which is witnessed by a large gathering of people.

Ananda Chandra received education at the Dacca Normal School. After leaving school he served for some time as a pundit (schoolmaster), and then entered the Police Department, but was there only a short time. He is a Barendra Brahman and belongs to a respectable family. He learnt to smoke ganja when he was only a boy. His present age is 60 years. He has the reputation of being a versifier. He smokes two pice worth of ganja every day.

He married at Fattehpur in the Mymensingh district. There he introduced Trinath worship 27 years ago. A *panchali* (poem) reciting the praises and exploits of Trinath was first published at Dacca in 1871 and the first edition (1,000 copies) was sold in a few months.

The circumstances under which the worship was first started.—Ananda Chandra Kali was at the time living in the house of his father-in-law. He was thinking of introducing the worship of a common god, who might be worshipped by all classes, rich and poor, Brahman and Chandal, and by all creeds, Saktas, Baishnavas, and Shaivas, and the idea occurred to him of having the present worship at which ordinary and inexpensive things, such as ganja, oil, and betel-leaf, were alone to be used.

Trinath (from Sanskrit *Tri*, three, and *Nath*, lord) is represented to be Brahma, Bishnu and Shiva, the Hindu Trinity in one.

Being a ganja-smoker himself Ananda Kali may have also thought that by introducing the worship he would be able to save the ganja-smokers from disrepute, as then ganja could be consumed in the name of a god and under colour of doing a religious or pious act.

Religious aspect of the worship.—The following translation of the Introduction to the *Trinath Mela* Panchali gives some idea of the subject :—

"The universe consists of the earth, the heaven, and the nether world, and Trinath is the lord of these three worlds.

"There was an incarnation of God in the form of Gour (Chaitanya), who delivered the sinners by preaching the name of Hari, but the Lord was not satisfied with this, and became concerned for the created, and soon he became incarnate again. Brahma, Bishnu and Shiva, gods in three forms, manifested themselves in one form. The one God, the Lord of the universe, seeing the miseries of mankind, came to their deliverance. Ananda (Ananda Chandra Kali, the originator) declares that the true and sincere worshippers of Trinath are sure to obtain salvation. Brahma, Bishnu, and Shiva met together and expressed their desire to come to this world in one form to receive worship.

"He is a truly pious man who worships Trinath, and blessings are showered on the worshipper.

"The worship should be made in a form in which the rich and the poor may equally join and may perform it easily.

"Only three things, each worth one pice, are required for this *puja* (form of worship). The things which please all must be selected. The offering should consist of *siddhi* (ganja), *pan* (betel-leaf), and oil, each worth one pice.

"The votaries should assemble at night and worship with flowers. The ganja should be washed in the manner in which people wash ganja for smoking. The worshipper must fill three *chillums* with equal quantities of ganja, observing due awe and reverence. When all the worshippers are assembled the lamp should be lit with three wicks, and the praises of Trinath should be sung. As long as the wicks burn, the god should be worshipped and his praises chanted. The god should be reverentially bowed to at the close of the puja. When the reading of the *Panchali* is finished, those that will not show respect to the *Prasad* (the offering which has been accepted by the god), *i.e.*, *chillum* of ganja, shall be consigned to eternal hell, and the sincere worshippers shall go to heaven."

How the worship spread.—Ananda Kali commenced the puja with the aid of some ganja-smokers in the village of Fattehpur. A large number of people consume ganja in the Dacca

and Mymensingh districts, and the worship soon became popular. In fact it spread like wild-fire from one village to another among the ganja-smokers. Those that were not in the habit of consuming ganja also followed their example.

The following circumstances assisted the spread of the worship :—

I.—The puja is open to all classes from Brahmans to Chandals and to the rich and the poor. Caste does not stand in its way, and it may be performed almost every day and in all seasons.

II.—The puja is a *Manasik Puja* (made in pursuance of a vow on the fulfilment of the object desired). People have been led to believe that Trinath possesses the power of healing the sick and fulfilling desires, and that those who neglect his worship meet with disgrace, while those who observe it attain success in life. There are several stories in the Panchali narrated in illustration of this statement. It is also popularly believed that in the house where Trinath is worshipped cold, fever and headache do not appear.

III.—This is a cheap form of worship. The puja can be performed by even the poorest, only three pice being required.

IV.—People of the lowest class can mix with those above them without distinction of caste or creed on the occasion of these pujas.

V.—Ganja can be consumed by all in the name of a god, and the practice cannot be looked down upon, because it is done under certain forms and religious ceremonies. It is also popularly believed that those who mock the worshippers of Trinath shall be ruined and shall be the victims of misfortune.

The worship prevails not only among the poor, but also among the well-to-do. The latter often entertain their friends after the puja.

Women do not take any active part in the worship, but they often listen to the reading of the *Panchali*.

The worship is more or less general in the following districts :—(1) Dacca, (2) Mymensingh, (3) Faridpur, (4) Backergunge, (5) Noakhali, (6) Tippera, (7) Chittagong, (8) Bogra, (9) Sylhet, and (10) Pabna (Serajganj side).

The worship is on the decline. It is almost dying out among the educated *bhodrolokes*, but among the masses it still exists.

I have ascertained the above facts from Dr. Chandra Sekhar Kali (brother of the originator, Ananda Chandra Kali) and many other respectable persons, and also from personal enquiries in the Dacca, Chittagong and Rajshahi divisions.

MEMORANDUM BY Mr. R. G. CULLODEN, ASSISTANT COLLECTOR OF CUSTOMS AND SUPERINTENDENT OF THE PREVENTIVE SERVICE, RANGOON, ON THE SMUGGLING OF GANJA INTO RANGOON.

Ganja has always been considered a prohibited drug in Burma. The prohibition of its importation has so far been successful that the drug has been kept out of the local market to a considerable extent; this is proved by the fact that whenever traced to any one possessing it, only very small quantities of the drug have been found on them.

That there exists a demand for the article and that high prices are paid for it no one can deny; this is testified to by the many attempts that are made to smuggle it into the country, and on which even the heavy penalties inflicted on detected cases do not appear to have any deterrent effect.

From the statement of seizures of ganja during the past five years, it will be seen that the illicit traffic is kept up with more or less regularity, the largest quantities coming from the Madras Coast. Advantage has also been taken of smuggling the drug by post.

There are many amongst the consumers who cannot do without the drug, the want being felt by them as much as the want of alcohol is by persons addicted to its use. The following will illustrate this. A Madrassi sepoy was once brought up for being in possession of 3 tolas weight of ganja, he cried as though his very existence was at stake when told that the drug would be confiscated. He said that if it was taken from him, he would be unable to perform his duities, and as he was ordered to a station in Upper Burma, where it was impossible to obtain it he would die. He declared that he only indulged in very small quantities at a time and that it did him no harm. I have seen several similar instances of a craving for the drug, the accused in such cases being more willing to submit to a fine than be deprived of the ganja. From my experience I am inclined to believe that the moderate consumption of the drug has not the demoralising effect imputed to it, though I would not venture to assert that there would not be a tendency to the abuse of the drug, if the prohibition was removed.

Punjabis, Pathans, natives of Upper India and Madrassi sepoys are those addicted to the use of ganja. The attempts at smuggling have been more frequent since the introduction of the Punjabi element in the police force; this is no doubt owing to a greater demand for the article. Judging from the physique of the latter race of men it would appear that the moderate indulgence in the use of the drug is attended with no ill effects.

No case of Burmans making use of ganja has even been brought to my notice. Hemp is grown in Upper Burma, and Burmans, if they choose, could use it as a narcotic without let or hindrance. The Burma ganja is said to be inferior in quality to that obtained in India, hence it is not valued so much by the natives of India and smuggling is, therefore, likely to be always resorted to as a means of getting the latter article into Rangoon.

The following recent cases of seizure indicate how ganja is smuggled. On the 6th July 1893 the customs preventive officers, acting on information, searched the *S.S. Camorta* from Madras, and found 5,481 tolas of ganja packed in tin cases concealed inside the paint lockers in the forecastle of the steamer. As this part of the ship is occupied by the crew, they were charged with having brought it on board, but they disclaimed liability and consequently penalty of 500 rupees was inflicted on the vessel, in accordance with the orders of the Government of India as per letter No. 5205, dated Simla, 10th October 1889, the amount being recoverable rateably from the wages of the crew. On the 21st of the same month, or 15 days later, another large seizure was made, the ganja weighing 6,613 tolas and packed in tins was found concealed partly in the lazarette and partly inside the linen locker of the *S.S. Scindia* from Madras. The captain handed over the butler of the first-class saloon as the guilty one, the key of the locker having been in his possession. The accused was convicted and sentenced by the Magistrate to pay a fine of 500 rupees, and this not being paid, he was sent to prison for three months and 20 days. On the 21st August last as much as 11,760 tolas of ganja were found in two cases landed as passengers luggage ex S.S. *Nowshera* from Madras. The gunner of Brooking Street wharf was implicated, as on landing those boxes he declared that they belonged to him. He was sentenced by the Magistrate to three months' imprisonment and to pay a fine of Rs. 500. His accomplice, a native, who brought the ganja by the steamer as his luggage was awarded two months' imprisonment. On the 18th of last month 2,420 tolas of ganja were found in a case declared to contain a sewing machine. The case was in transit from Madras to Mandalay and was consigned to a native at the latter place. It was allowed to go on to its destination and intimation having been sent by telegram to the Deputy Commissioner there, two natives who came and took delivery of the case were arrested. There has since been another seizure of 3,360 tolas of ganja, the drug being found in a box declared to contain shoes intended for Mandalay. The case was dealt with in a similar manner to the foregoing one, but the result is not yet known.

In 1888-89 the number of seizures was abnormally high, the aggregate quantity of ganja weighing as much as 17,753 tolas, and may be accounted for by the influx of a large body of native (Punjabi and Madrassi) troops consequent on the annexation of Upper Burma.

The following statement shows the seizures of ganja during the last five years, also during the first eight months of 1893-94 :—

Year.	Quantity. Tolas.
1888-89	17,753¾
1889-90	626
1890-91	1,218
1891-92	2,430
1892-93	5,856
1893-94 (from 1st April to 30th November)	30,353

LETTER No. 133—11-E., DATED 5TH MARCH 1894, FROM THE ASSISTANT SECRETARY TO THE FINANCIAL COMMISSIONER, BURMA, TO THE REVENUE SECRETARY TO THE CHIEF COMMISSIONER, BURMA.

*1. No. 859—11-E., dated the 27th January 1894.
2. No. 55—11-E., dated the 3rd February 1894.
†1. Letter No. 11—34, dated the 1st December 1893, from the Deputy Commissioner, Bassein.
2. Letter No. 3124—14-29, dated the 13th December 1893, from the Deputy Commissioner, Amherst, with enclosures.
3. Letter No. $\frac{502-14-E.}{14-93}$, dated the 1st December 1893, from the Deputy Commissioner, Akyab.
4. Letter No. 6—62-R., dated the 13th December 1893, from the Deputy Commissioner, Rangoon Town District, with enclosures.
5. Letter No. 315—56-E., dated the 20th November 1893, from Commissioner, Pegu, with copy of answer to question 35.
6. Letter No. 494—20, dated the 2nd December 1893, from Chief Collector of Customs. (Copy of enclosures forwarded with Secretary to Financial Commissioner's letter No. 55—11-E., dated 3rd February 1894.)
7. Letter No. 1322—37-93, dated the 19th December 1893, from the Officiating Commissioner, Arakan, with enclosures.
8. Letter No. 9—1397, dated 12th January 1894, from the Deputy Commissioner, Toungoo.
9. Letter No. 232—14-E., dated the 16th January 1894, from the Commissioner, Southern Division.
10. Letter No. 18—$\frac{20}{26}$, dated the 24th January 1894, from the Deputy Commissioner, Mergui.
11. Letter No. 464—136, dated 30th January 1894, from Commissioner, Tenasserim Division.

With reference to paragraph 3 of your letter No. 16—2-E.-19, dated the 2nd November 1893, and in continuation of this office letters cited in the margin, * I am directed to forward, for the Chief Commissioner's information, copies of the replies† received from the officers who were consulted concerning—

(I) the smuggling of ganja; and

(II) the success of the system of prohibition which has been adopted in Burma.

On the first point the information supplied by the Deputy Commissioners of the four seaport towns shows that the smuggling of ganja is steadily increasing, as will be seen by the following summary of cases of smuggling detected, *viz.*:—

	1890-91.	1891-92.	1892-93.
	Tolas.	Tolas.	Tolas.
(I) Rangoon	8,423	9,771	13,115
(II) Moulmein	932	213	92
(III) Akyab	245	567	1,018
(IV) Bassein	*Nil*	*Nil*	*Nil*
TOTAL ...	9,600	10,551	14,225

The increase is most marked in Rangoon and Akyab, where Indians form a considerable portion of the population. In Moulmein there has been a large falling off. No reason has been given by the Deputy Commissioner for this decline.

2. Colonel Butler, Deputy Commissioner, Henzada, who was also consulted on the two points, is unable to furnish any information, and no report of any kind has been furnished by Lieutenant-Colonel Adamson, Commissioner, Central Division, although, as previously stated an urgent reminder was sent to him on the 20th January 1894.

No. 11—34, dated the 1st December 1893.

From—The Deputy Commissioner, Bassein,

To—The Secretary to the Financial Commissioner, Burma.

With reference to your letter No. 337—116-E., dated 11th November 1893, I have the honour to state that there has been no case of smuggling of ganja into this district for the years 1890-91, 1891-92, and 1892-93.

No. 3124—14-29, dated the 13th December 1893.

From—The Deputy Commissioner, Amherst District,

To—The Secretary to the Financial Commissioner, Burma.

With reference to your letter No. 337—116-E., dated 11th ultimo, I have the honour to submit herewith statement showing the quantity of ganja smuggled into Moulmein in 1890-91, 1891-92, and 1892-93. There has been no case of smuggling of ganja in the Amherst sub-division. No reports have been received from the sub-divisional officers of Thaton and Gyaing: they have been reminded to submit the same at once.

Statement showing the quantity of ganja smuggled into Moulmein.

	1890-91.	1891-92.	1892-93.
	Tolas.	Tolas.	Tolas.
Quantity of ganja smuggled into Moulmein ...	932¼	212⅝	92⅝

No. $\frac{502-4-R.}{14-93}$, dated the 1st December 1893.

From—The Deputy Commissioner, Akyab,

To—The Secretary to the Financial Commissioner, Burma.

I have the honour to acknowledge the receipt of your letter (Financial Department), No. 335—116-E., dated the 11th November 1893, giving cover to two printed copies of "Instructions to witnesses (Burma only)" framed by the Indian Hemp Drugs Commission, and to forward my answers to some of the nine queries framed by the Commission.

2. As regards point (1) I am inclined to think that after a three years' experience as Deputy Commissioner of Rangoon Town from May 1890 to June 1893 smuggling has increased, and that it is due to the influx of natives of India from the Madras Presidency, also to the increase of native troops, since the events of 1885. The records of cases tried and the experience of the Rangoon excise and cutsoms officers will, I think, prove that I am in all probability right. It is now brought in to some extent by post, but principally in Rangoon by the crew of the British India Steam Navigation Company's steamers, who put it in floating tins, and as they come up the river, somewhere about Elephant Point, throw it overboard to accomplices who are on the look-out in small boats or sampans.

3. As regards point (2), I should think, considering the fact that ganja is not used by indigenous races of Burma, or, if it is, only in very solitary instances, that the system of prohibition has on the whole been successful. But it is by no means certain whether the success may not be due to the fact that the use of opium has taken its place. I cannot give any other facts to support my view. The marginal statement shows approximately the quantity smuggled during 1890-91, 1891-92, and 1892-93.

1890-91.	1891-92.	1892-93.
Tolas.	Tolas.	Tolas.
1	30	427
0	211	95
39	227	364
205	99	132
245	567	1,018

4. One copy of the answers to these questions has been sent to the Commissioner direct as desired by you.

No. 6—62-R., dated the 13th December 1893.

From—The Deputy Commissioner, Rangoon Town District,

To—The Secretary to the Financial Commissioner, Burma.

With reference to your letter, Financial Department, No. 337—116-E., dated 11th instant, I have the honour to submit a statement showing the quantity of ganja smuggled into Rangoon in each of the years 1890-91, 1891-92, and 1892-93, together with a copy of Excise Officer Mr. Lewis' report on the subject. It is quite possible that in some cases some ganja has been shown twice over, and the quantities entered by the Chief Collector of Customs as smuggled are also contained in the amounts shown by the District Superintendent of Police and the Magistrate, but I find this cannot now be accurately ascertained.

Statement showing the quantity of ganja smuggled into Rangoon.

Received in	1890-91.	1891-92.	1892-93.	Remarks.
	Tolas.	Tolas.	Tolas.	
Custom House	1,218	2,430	5,856	
Police Office	1,767	386	1,113	
Assistant Magistrate's Court	125	1,299	384	
Junior Assistant Magistrate's Court ...	4,603	4,591	60	
Treasury	710	1,065	5,702	
TOTAL ...	8,423	9,771	13,115	

Report regarding ganja (Financial Department No. 357—116-E).

Ganja was prohibited in Burma in 1873. At that time I was in Thayetmyo, where there was a ganja-shop. Burmans who smoked ganja then were afraid of being punished for being in possession of it and took to using kunbon, which is prepared from opium, betel, and other leaves cut fine, dried, and fried with opium; then they smoke it. Natives—especially those belonging to the Commissariat Department, elephant and cattle drivers and lascars—did not give up the use of ganja, but they smoked it secretly, as ganja grew round about there, especially at Allanmyo. The natives also use ganja for medicinal purposes for their cattle. At that time the native troops in the station for two or three days found it very difficult to get ganja; they soon got their supply cheaper than the license-holder sold it to them, as some men started on illicit traffic. In 1875 I came to Rangoon; then I found ganja, although prohibited, was used, and men were pointed out to me as ganja-smokers. They did not smoke in public, and how they got their ganja was very difficult to find out. After some time it was discovered that large quantities of ganja were imported through banghy post direct from Madras, addressed to butlers of different gentlemen in cantonment, and to the native regiment. This matter was represented to the Local Government, and at that time large quantities of ganja were seized in post.

Since the annexation of Upper Burma in 1885, large numbers of native troops and followers and cattle-drivers have come to Burma, and the demand for ganja has increased. I have heard that there is no difficulty in getting ganja in up-country. Rangoon is now becoming thickly populated with natives of India who are in the habit of using ganja. As it is not sold in Burma they get it from elsewhere. In the last two or three years large seizures of ganja have been made by the different departments, which plainly shows that smuggling of ganja is on the increase. There is a great demand for ganja by natives of India in Rangoon at present.

The abolishing of the sale of ganja in Burma has not, I think, reduced the use of it with the natives. It has increased illicit traffic, and has let people in other places know what the value of ganja in Burma is.

As the native population is so largely increasing in the town of Rangoon, and the demand for ganja so great, I would beg to suggest that, so long as ganja is allowed to be used and sold in India, that the same privilege be granted in Burma, with this restriction, that it be only sold to the natives.

The license-holder should be allowed to sell at one time one tola to a person, except on an order from the Deputy Commissioner granted to a person or persons who require a larger quantity of ganja for medicinal purposes.

No. 315—56-E., dated the 20th November 1893.

From—The Commissioner, Pegu Division,

To—The Secretary to the Financial Commissioner, Burma.

With reference to your letter No. 335—116-E., dated 11th November 1893, I have the honour to report that, in compliance with your instructions, one copy of the questions, with my replies to the few questions that I am able to answer, has been this day (20th November) posted to the address of the Indian Hemp Drugs Commission, and a second copy is enclosed herewith.

With regard to paragraph 2, I have the honour to say that my views on this point are given in my answer to question 35.

Question 35.

Would it be feasible to prohibit the use of any or all of these drugs? Would the drug be consumed illicitly? How could the prohibition be enforced? Would the prohibition occasion serious discontent among the consumers? Would such discontent amount to a political danger? Would the prohibition be followed by recourse to (*a*) alcoholic stimulants or (*b*) other drugs?

Colonel C. B. Cooke's answer.

The use of the drug is prohibited in this province. The prohibition is intended to protect the indigenous population from acquiring a habit which is by some persons held to be a cause of insanity. The alien population of Burma at the time that the prohibition was ordered was insignificant in number: in the twenty years that population has probably increased five hundred-fold, and the difficulties of enforcing the prohibition have also increased. But still I think the prohibition should not be omitted.

No. 494-20, dated the 2nd December 1893.

From—The Officiating Chief Collector of Customs, Rangoon,

To—The Secretary to the Financial Commissioner, Burma.

In reply to your letter No. 336—116-E., dated the 11th November 1893, I have the honour to submit a memorandum by Mr. R. G. Culloden, Assistant Collector of Customs

and Superintendent of the Preventive Service, Rangoon, an officer of long experience in the department, on the results, from a customs point of view, on the prohibition of ganja in this province.

The note appears to me to prove that there is a large demand in Burma for ganja; the people *will* try to obtain it, and that the statistics of seizures by custom-house officers indicate that determined efforts are made by smugglers to import ganja.

No. 1322—37-93 (Excise), dated 19th December 1893.

From—The Commissioner, Arrakan Division,

To—The Financial Commissioner, Burma.

I have the honour to submit a copy of my replies to the questions asked by the Hemp Commission.

With reference to paragraph 2 of your No. 335—116-E., dated 11th November, I do not think there is any necessity for altering the system of prohibition in force in Burma: except in the Akyab district, which borders on Chittagong, the drug is not much used.

I append a statement showing the number of ganja cases reported and brought to trial with the total amount of ganja seized, since the special excise establishment sanctioned in your No. 282—23-E., dated 10th February 1891, was introduced.

These figures have been supplied by the Inspector of Excise.

Statement showing the number of ganja cases reported and brought to trial and quantity of ganja seized by the special Excise Department, Akyab, since April 24th, 1891.

Year.	Number of cases reported.	Number of cases convicted.	Quantity of ganja confiscated.	Remarks.
			Tolas.	
1891-92	31	26	267½	
1892-93	27	18	260 5/16	
1893-94	17	11	171	From 1st April to 30th November 1893.
TOTAL ...	75	55	698 13/16	

No. 97—139, dated the 12th January 1894.

From—The Deputy Commissioner, Toungoo,

To—The Assistant Secretary to the Financial Commissioner, Burma.

With reference to your No. 318—11-E., dated 11th instant, and annexures, I have the honour to forward one copy of the questions of the Hemp Drugs Commission, together with my answers to some of the same.

2. With reference to the last paragraph of your letter No. 335—116-E., dated 11th November 1893, I have the honour to state that in my opinion the system of prohibiting ganja in Burma has been to a very large extent, though not entirely, successful. I base this opinion on my experience as a Magistrate. I regret that I cannot give the actual number of cases brought before me in which the possession of ganja was involved, but they were not sufficiently numerous to accuse the prohibitory system of failure, though quite enough to prove that a demand for the drug does exist, which has to be met by smuggling.

No. 232—14-E., dated the 16th January 1894.

From—The Commissioner, Southern Division,

To—The Financial Commissioner, Burma.

With reference to paragraph 2 of your letter, Financial Department, No. 335—116-E., dated 11th November 1893, I have the honour to report that, as far as my experience goes, the system of prohibition of ganja has worked well. This is based on my experience in different places. It is very possible, however, that the large influx of natives in the Military Police, etc., within the past few years may cause an increase in the consumption, but I think the existing Excise and Police Departments can cope with it.

No. 18 $\frac{29}{26}$, dated the 24th January 1894.

From—The Deputy Commissioner, Mergui,

To—The Secretary to the Financial Commissioner, Burma.

In reply to your reminder No. 145—116-E., dated the 5th January 1893, directing attention to paragraph 2 of letter No. 335—116-E., dated the 11th November 1893, calling for an opinion as to the success of the system of prohibition of ganja which has been adopted in Burma, I have the honour to state that, as far as the general public are concerned, the use of ganja is practically extinct. A few of the natives of India still manage to smuggle it in for their own use, and detection is difficult.

2. Owing to my absence on tour, the reply to your reminder has been somewhat delayed.

No. 464—136, dated 30th January 1894.

From—The Commissioner, Tenasserim Division,

To—The Financial Commissioner, Burma.

I have the honour to state in reply to the 2nd paragraph of your Secretary's letter No. 335—116-E., Financial Department, dated 11th November last, that I have never, as far as my recollection serves me, come across a single instance of a Burman using or possessing ganja. In every case with which I have had to deal in my 31 years' experience in this province the offender was a native of India. The effect of the prohibitory system has undoubtedly been to render it somewhat difficult and dangerous for any one to possess the drug, and this must have very largely tended to keep it out of the hands of Burmans. In my opinion, if this system had not been adopted, the results would have been disastrous. Burmans would very certainly have taken to use ganja, for which they have now no desire, and from their national character those who took to it would have used it to excess, as is the case with opium, which, taken in moderation, does no harm.

2. It is most important to remember that the markedly characteristic feature in the Burman character is want of self-control. A Burman is, as a general rule, unable to deny himself anything obtainable. He won't work if he can get natives of India to work for him; he no sooner makes money than he spends it on silk clothes or in gambling at boat, cart, and pony races. Naturally happy and good-natured and by religion and training careful of life, he, on comparatively slight provocation, attacks his own friend with any weapon on which he can suddenly lay his hand, and will cause death without a thought and because he cannot control himself sufficiently to think. Long-premeditated crimes of violence are comparatively rare: a dacoity is got up in a day or two and is carried out often enough by men who are ordinarily fairly honest peasants, but perhaps gamblers or opium-smokers, or most rarely, if ever, drunkards in want of money to satisfy what by indulgence has become an uncontrollable craving. If a Burman once takes to gambling, to drinking, or to opium-smoking, he is for this very reason lost, and he, by his want of self-control, turns what is a harmless amusement or pleasure into a vice that utterly ruins him and makes him still more recklessly self-indulgent than he is by nature. It is for this reason that opium-smoking is for Burmans such a monstrous evil. If a Burman took to ganja in a similar way as he would were its consumption and even possession not prohibited, the effects would be terrible.

3. I regret that the very fact of the prohibition renders it impossible for me to furnish you with any statement of fact, except that I have never known a case of a Burman using ganja.

ANALYSIS MADE BY THE COMMISSION OF CASES REFERRED TO BY WITNESSES IN ANSWERING QUESTION NO. 8.

I.—Cases the records of which have not been called for.

Serial No.	Province.	Name of witness.	Number of witness.	Name of criminal.	Nature of the crime.	Reason for attributing the crime to hemp drugs.
1	Bengal ...	Mr. Williams ...	13	Not given ...	A Darbhanga sowar seems to have run amok in Calcutta. Witness was told he did not take liquor.	"My knowledge of the case was entirely [illegible]."
2	Do. ...	Mr. Taylor ...	36	Do. ...	When witness was passing through a Santhal village in 1856 with some friends, a man attacked them with a sword. It was during the Santhal rebellion.	The villagers said the man himself [illegible] was stupefied with [illegible].
3	Do. ...	Abhitas Chandra Mukerjee.	63	Do. ...	A lad in an altercation with his uncle killed him with a sword. This case was reported as a witness by the District Superintendent, Police.	The lad [illegible] and the uncle had been [illegible] monster [illegible].
4	Do. ...	Nobin Chander Sen	30	Do. ...	A fakir committed murder.	No special reason given.
5	Do. ...	Govind Chandra Das	64	Rudhai Haldar ...	A man killed his mother because she would not bring his son who had been cremated, but whom he believed to have been raised from the dead by Trinath.	The murderer used to [illegible] smoker [illegible] Trinath fair." [illegible] doubtful.
6	Do. ...	Nobo Gopal Bose ...	218	Not given ...	A Brahmachari sacrificed a human being.	The account [illegible] he was [illegible] ganja.
7	Do. ...	Nimai Charan Das...	142	Do. ...	A Muhammadan fakir killed a disciple with his *chelm* for being late in bringing his smoke.	No reason [illegible] find [illegible] was a [illegible]
8	Assam ...	K. C. Sanyal ...	31	Not given ...	A man addicted to *ganja* was sitting talking with a friend and suddenly killed him.	He was [illegible] to ganja.
9	North-Western Provinces.	Mr. Roberts ...	32	Not given ...	A constable threw small stones at his comrades and threatened to shoot, but gave up his rifle quietly.	He was [illegible] to ganja.
10	Do. ...	Mr. Partridge ...	20	Do. ...	A fakir in Srinagar chopped off a boy's head.	He was [illegible] considered [illegible] "fairly [illegible] under [illegible]
11	Do. ...	Munna Lal ...	123	Do. ...	A fakir threatened people on the street over 20 years ago.	The witness remembers [illegible] *charas*.
12	Do. ...	Do.	123	Do. ...	2. A man was making a disturbance as witness passed by.	The people [illegible] the street [illegible] he was [illegible] with ganja or *charas*.
13	Do. ...	Pandit Debi Parshad	205	Do. ...	A fakir threw idols into a well and also pushed in a man who remonstrated with him, fourteen years ago.	"He was [illegible] same[illegible] asylum [illegible] twelve [illegible]
14	Do. ...	Mohant Keshoram Rai.	242	Do. ...	Two men quarrelled four or five years ago.	No reason [illegible] three [illegible]
15	Do. ...	Do.	242	Lahri Baba ...	2. Killed a child for his ornaments 25 years ago when under the influence "of *bhang* with *dhatura* and arsenic in it."	
16	Do. ...	Do.	242	Not given ...	3. A teacher 40 years ago killed a student.	
17	Do. ...	Mr. R. Wall ...	233	Not given ...	A Gurkha soldier ran amok about 1879 at Naini Tal.	"It was [illegible] to *ganja* [illegible]

Serial No.	Province.	Name of witness.	Number of witness.	Name of criminal.	Nature of the crime.	Reason for attributing the crime to hemp drugs.
18	North-Western Provinces.	Mr. R. Wall ...	233	Not given ...	2. A sepoy shot Lieutenant Goode at Benares in 1883.	"I cannot say whether it was a hemp case."
19	Punjab ...	Shekh Riaz Hossain	67	Not given ...	A fakir murdered a Tahsil chaprasi in Muzaffergarh.	He "was a constant consumer of *bhang* and did nothing else."
20	Do. ...	Mr. Robinson ...	16	Do. ...	A man nearly killed a banya with whom he had had dealings.	He was "under the influence of some drug."
21	Do. ...	Karm Elahi ...	44	Do. ...	A Sikh in Rawal Pindi throttled his nephew 8 or 9 months old.	He was "under excitement," and apparently insane, not under the influence of *bhang* at the time.
22	Do. ...	Colonel Hutchinson	4	Do. ...	A Gurkha belonging to the witness' then regiment ran amok. It was in the sixties. There was jealousy in the case.	No reason given. "It is too long ago to recollect details."
23	Do. ...	Mr. Warburton ...	30	Do. ...	A police sergeant about 1874 became violent from the use of *bhang* and *charas*. Had he got a sword there would have been injury.	Witness' recollection. "He had been brooding over being passed over for promotion."
24	Central Provinces.	Hosen Khan ...	79	Not given ...	The witness' brother-in-law nearly killed his wife under the influence of *ganja*.	No special reason given.
25	Do. ...	Adhar Singh Gour...	69	Do. ...	A confirmed smoker killed his own child.	The Sessions Court acquitted the man on account of insanity due to mental trouble.
26	Do. ...	Taradas Banerjee ...	70	Do. ...	A Sanyasi killed a Kapalik in the temple over 20 years ago.	He was a *ganja*-smoker, but witness cannot say he indulged that day.
27	Do. ...	Brijmohan Patnaik...	74	Paltu ...	Tried to kill a woman under the influence of *ganja*.	No reason given. Witness does not know about provocation.
28	Do. ...	Dinanath, Rai Bahadur.	32	Not given ...	A Gond killed his wife because she would not give him water.	The man said he had done the deed under the effect of *ganja*.
29	Do. ...	Mr. Naylor ...	30	Do. ...	A Banjara killed his wife and two members of the tanda 18 years ago.	The people of the tanda said so.
30	Do. ...	Do. ...	30	Do. ...	2. A zamindar 15 years ago killed his brother by whose death he succeeded to the estate.	His friends said so.
31	Do. ...	Prem Singh ...	57	Do. ...	"I have seen a boy, not used to ganja, on becoming intoxicated with it, kill his father."	Witness was present apparently.
32	Do. ...	Mahomed Tahi ...	33	Guppu Singh ...	Guppu wounded with a sword one of several constables who were drinking bhang with him 20 years ago.	The story is that he was drinking *bhang* at the time.
33	Do. ...	Do. ...	33	Not given ...	2. A Nat killed his wife 25 years ago.	The story is that he was drinking *bhang* at the time. "He subsequently became a lunatic and was sent to Jubbulpore."
34	Do. ...	Mr. Pasley ...	34	Do. ...	One Sadhu killed another ...	No reason given.
35	Madras ...	Mr. Simpson ...	67	Not given ...	A native officer shot his Subadar Major from jealousy about 1880.	Witness gives up this case. (*N.B.*—This case is quoted by witnesses Nos. 81 and 82.)

Serial No.	Province.	Name of witness.	Number of witness.	Name of criminal.	Nature of the crime.	Reason for ascribing the crime to ganja.
36	Madras ...	Mr. Simpson (continued).	6	Not given ...	2. A barber cut the throat of his first wife and his own that they might die together, about 1883.	2. Witness ... this case.
37	Do. ...	Do. ...	Do.		3. A boy in mischief threw a stone over a purdah and killed a woman sleeping on the other side.	3. This ... people ... had thrown the stone ...
38	Do. ...	Iyawamy Pillay ...	109	Do. ...	A consumer was quarrelsome and used to attack his relatives and beat them.	The ... Court. ... also.
39	Do. ...	Dr. Lancaster ...	90	Do. ...	A sepoy in hospital at Nellore stabbed the orderly. He was "in a state of doubtful sanity" (*vide* Dr. Pemberton's evidence).	He ... eliminated ... asylum.
40	Do. ...	Dr. Pemberton ...	98	Do. ...	A sepoy in Burma in 1881 ran amok. This witness also speaks to the Nellore case (No. 39 *supra*).	The ... der observation.
41	Do. ...	Dr. Chatterjee ...	88	Do. ...	A sepoy ran amok in 1887 in Burma.	The ... Chatterjee ... oral ... recollection ...
42	Do. ...	Vasadeo Rajamani ...	128	Do. ...	A consumer tried to stab another man 23 years ago.	The ...
43	Do. ...	Mahomed Murtaza ...	82	Do. ...	A sepoy shot a Jamadar without reason.	The ... he was ...
44	Do. ...	B. C. Chatterjee ...	167	Do. ...	A man in Ganjam committed a murder.	"He was ... of *ganja*.
45	Do. ...	Revd. Mr. Higgins ...	150	Do. ...	A Brahman beat his child and wept when he became sober.	The man ...
46	Do. ...	Very Rev. A. Chelvam.	164	Do. ...	A sepoy was anxious 42 years ago to do violence, but could not control his limbs.	No reason ... then ...
47	Do. ...	Mr. Merriman ...	28	Do. ...	A pensioned sepoy murdered his daughter-in-law and her brother and sister.	The man ...
48	Bombay ...	Mr. Kennedy ...	54	Not given ...	A Biluch sepoy ran amok and shot some people.	Witness ... this was ...
49	Do. ...	Mr. Woodward ...	11	Do. ...	A man attacked and was shot by Mr. Woodward, Collector of Nasik.	"It was ..."
50	Do. ...	V. R. Katti ...	116	Do. ...	A Lingayat trader killed his brother by night.	He was a ...
51	Sind ...	Purbhdas Shewakram Advani.	29	Not given ...	A sepoy at Hyderabad ran amok several years ago.	"It was ... (Witness ... case does not ...
52	Do. ...	Rahmatula Khan ...	9	Do. ...	A drinker of bhang committed a murder in a scuffle about plucking berries.	The man was ...
53	Do. ...	Mahomed Murid ...	11	Kowra Khokar ...	Kowra Khokar killed a companion at night.	"They were ... about opium ..."
54	Burma ...	Mr. Mayne ...	23	Not given ...	A sepoy shot a Subadar-Major at Sagaing in 1888.	He was a ...
55	Do ...	Do	Do.	Do. ...	2 Another sepoy attempted to murder a Burmese girl	Ditto.
56	Berar ...	V. V. Khot ...	39	Do. ...	A man ran amok in Mhow ...	No reason ...

Serial No.	Province.	Name of witness.	Number of witness.	Name of criminal.	Nature of the crime.	Reason for ascribing the crime to ganja.
	Bengal ...	Mr. Bell ...	36	Not given ...	A lunatic murdered a sweeper while intoxicated.	No reason given.
	Do. ...	Mr. O'Grady ...	6	Ambeer ...	The servant assaulted the woman when he dismissed him.	The man made the charge.

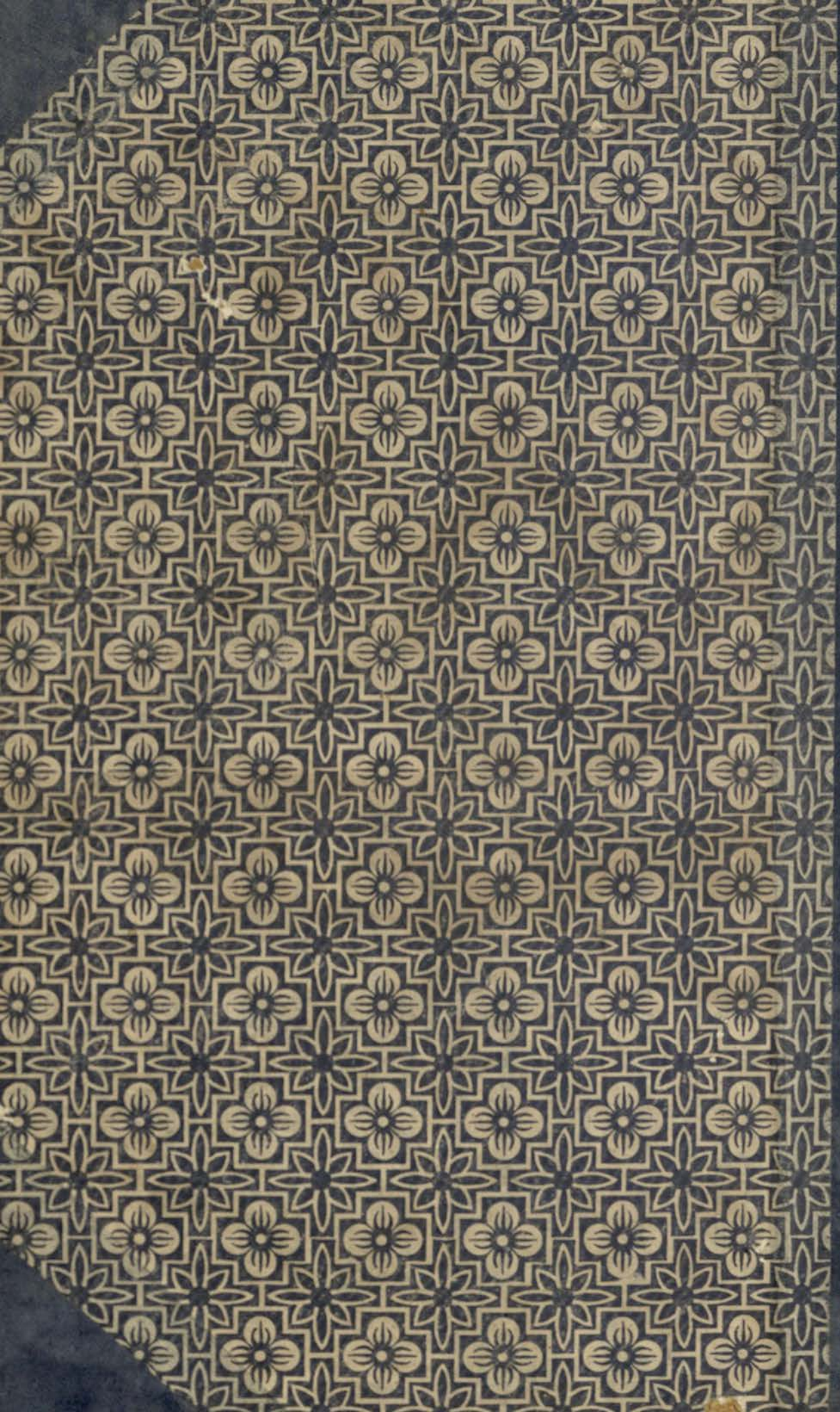
II.—Cases in which the records were examined by the Commission.

Serial No.	Province.	Name of witness.	Number of witness.	Name of criminal.	Witness's view of the case.	Result of examination of records.
	Bengal ...	Mr. Ward ...	39	Not given ...	A sepoy suddenly murdered a woman in a house he went to repair, his own wife being present.	In an altercation the sepoy "first struck the deceased with a spade handle, and then with the spade itself, which he had in his hand as he had been cutting fuel."
	Do. ...	Do. ...	Do.	Jathak Singh ...	1. A sepoy murder cruelly treated his child. While under trial and on jail he rocked at night his child and other children until killed another man with fatal results to their parents.	The man usually treated his children very kindly. He determined to kill his wife and children, as he had been told by a fakir that he would be murdered if he did not do so. There was no question of ganja.
	Do. ...	Dr. Chevers ...	104	Radhoh Chandra Mallic.	"A Bengali Babu, as the result of a single debauch in an attack of ganja mania, slew seven of his nearest relatives in bed during the night, under a rapid recovery, and more apparently liked signed insanity."	The Khasias have found that a certain experiment has been peculiar to his profession. After his wife's death [illegible] several [illegible] [illegible] [illegible]

Serial No.	Province.	Name of witness.	Number of witness.	Name of Criminal.	Witness's view of the case.	Result of examining the record.
69	Assam ...	Mr. Moran ...	33	Lala Kamar ...	"I had a case of a man in my garden who cut off his wife's head whilst temporarily insane under the effects of the drug."	It is a striking fact that Mr. Moran was examined at great length before the Magistrate and never mentioned *ganja*. The record is quite against the *ganja* theory. The man seems to have been addicted to liquor.
70	Do. ...	Mr. McCabe ...	5	Not given ...	"A Nepalese under the excitement caused by *bhang* cut down an inoffensive person whom he had never met before and with whom he had no sort of quarrel whatever.	The man was drunk at the time and committed the murder in a drunken fray, of which the principal feature was that he demanded more drink.
71	Punjab ...	Mr. Maconachie ...	8	Allah Baksh ...	In 1892 "a fakir excited with *bhang* made a furious attack on a companion with his club."	The man in a quarrel with his wife wounded her with an axe. Only one witness spoke to the use of *bhang*. Mr. Maconachie himself tried the case.
72	Do. ...	Mr. Dames ...	9	Kalu Khan, Khosa	"Kalu Khan stabbed a man with whom he had no previous quarrel while under the influence of *bhang*."	This is a very interesting case in connection with an effort on the part of the Punjab Government to make the Khosas give up all intoxicants.
73	Madras ...	Colonel Chrystie ...	65	Sheikh Hussain ...	"A peon, having been fined four annas, got into a high state of irritation and went and smoked *bhang* in a *mokhi* in Anantapur at noon. The *bhang* appears to have excited him to madness." He beat an old man to death, and threatened others with a club. [This case is quoted by several other Madras witnesses.]	This man's asyl[illegible] should be read a[illegible] judicial records [illegible] of the 18[illegible] c[illegible] punished as st[illegible] committed (a[illegible] when he [illegible] But inquir[illegible] dents and his [illegible] history show [illegible] sanity) the authori[illegible] are quite indepen[illegible] *ganja*.
74 to 76	Do. ...	Mr. Stokes ...	10	Three cases ...	"The 1st class Inspector of Police, Tirupatur taluk, gives three instances of murder which he attributes to this cause."	There is really nothing to show that any of these cases was due to hemp drugs. They were cases of murder of a concubine in one case and a wife in the other two.
77	Do. ...	Mahomed Anwar Saheb.	51	Kuppia ...	This man killed his child on Kartika Nakshatram day "to send the child to God." There was evidence that he was under the influence of *bhang*.	The High Court adopted this view of the case.
78	Bombay ...	Nanabhai Cowasjee	60	Not given ...	In 1885 certain Talavias committed a riot in Broach, in which Mr. Prescott (District Superintendent of Police) was killed.	The present report of the Collector shows that this riot cannot be attributed to hemp drugs.
79	Do. ...	Mr. Sinclair ...	6	Kunjandas ...	A servant entered his master's bed-room and attempted to throttle his master's wife. He was supposed to be under the influence of *bhang*.	The records bear out this view.
80	Do. ...	Do. ...	Do.	Not given ...	2. A Brahman was found in a temple with the broken image of a goddess. He was acquitted on the ground of insanity due to hemp drugs.	The man was acquitted for want of evidence that he had committed the offence at all. He had, moreover, been insane for twelve years, and his insanity was attributed to several causes other than hemp drugs.
81	Do. ...	Colonel Humfrey ...	51	Do. ...	A sepoy ran amok and (before the Sessions Court) pleaded that *bhang* had been given to him. "I do not think the *bhang* caused him to commit the crime. I think it was established that the man had taken *bhang*, and if he did take it the crime was committed within half an hour afterwards."	The High Court did not consider the taking of the *bhang* established. They held also that if taken, it was taken some hours before the offence; and they held that all his proceedings showed that he was not under the influence of the drug alleged to have been given to him, and that the offence was premeditated.

G. C. Press, Simla.—No. 98 H. D. (.)—21-1-95—1,510.

Digitized with financial assistance from

Shri Brihad Bhartiya Samaj

on 24 February, 2020